

Volume 18, Pre-Issue 2016-2017

# MONOGRAPH

*The Voice of the Pharmacy Student*



*PC: Pharmakon*

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UNIVERSITY OF TORONTO  
LESLIE DAN FACULTY OF PHARMACY

# Welcome!

We like to take a moment to introduce ourselves to everyone. We are Naomi and Natalie (N<sup>2</sup> if you like?), third year students at the Faculty of Pharmacy, who are thrilled to be taking on the role of Co-Editors for the year! We want to extend a warm welcome to the incoming 2T0 class, and a lovely welcome back to the 1T9, 1T8 and 1T7 classes. We wish everyone all the best with your new year of adventures, whether you are starting classes or APPE's.

Here at the Monograph, we have some very exciting news coming your way! We've worked throughout the summer to brainstorm and roll out some new features! We will be adding the following new features to the pharmacy student newsletter:

1. Online Access- We've partnered with Linda (Webmaster) to bring you online access to the Monograph on the UPS website! We are looking to add blog-like capabilities to articles, where you are able to comment and discuss articles in more detail. Stay tuned!
2. QR Codes- We are introducing the use of QR codes for different purposes in the Monograph. For example, it might link to an online copy of the Monograph, or even a jazzy summer tune (check out the one below)! These are just two examples of trying to integrate technology a little more into the newsletter.
3. Monograph Stand- Done reading your paper copy of the Monograph? Don't be trashy, recycle it! We're all about lending Mother Earth a helping hand, so if you're done reading your paper copy and don't intend on keeping it, kindly drop it off at the Monograph stand on B1 in front of the PB150 classroom. This also gives an opportunity for those who wanted a paper copy of the Monograph, to receive one.
4. Coupons- That wallet of yours feeling a little light? We've partnered with UPS External Affairs to hopefully bring you some savings from local vendors! Watch for updates!
5. Advice Column- We're excited to announce a partnership with recent pharmacy graduate Ida-Maisie Famiyeh! Ida has a kind heart, an upbeat attitude, a keen mind and a passion for mentorship! For these reasons, we believe she will offer excellent advice to all kinds of questions- whether it's about pharmacy or non-pharmacy related issues. Submit your questions for her here: [https://docs.google.com/forms/d/e/1FAIpQLSc3wmj8fC\\_n94QDW0Lu-vQcKpeTqDnn84q5ZAc8TpME2ByzINQ/viewform](https://docs.google.com/forms/d/e/1FAIpQLSc3wmj8fC_n94QDW0Lu-vQcKpeTqDnn84q5ZAc8TpME2ByzINQ/viewform)

Finally, we want to thank you, the readers, for taking a look at the Monograph's Pre-Issue for the 2016-2017 year. It contains the UPS Who's Who, which introduces the members of the Undergraduate Pharmacy Society, as well as an "Anti-Calendar", which offers students' perspectives on the classes they have taken. We've published these two features in this Pre-Issue in order to give the first issue some space for more content. Thank you to everyone who contributed to the Pre-Issue throughout the summer and a special shoutout goes to Pharmakon for the beautiful photos!

See you in the first issue!

Naomi Lo and Natalie Ternamian  
Monograph Co-Editors 2016-2017



The Undergraduate Pharmacy Society (UPS) Council is a group of thirty two pharmacy students and two staff advisors. Its' purpose is to serve pharmacy students through social, athletic, academic and professional events, to represent the voice of pharmacy students at the University of Toronto, to advocate for pharmacy students at the university, and to promote a positive image for pharmacy students through community involvement.

The Monograph asked the Council a few questions to get to know them a little better. Here's what they said:



PRESIDENT

FARAZ RAZZAGH, 1T8

**His role:** Oversees the activity of all students and council members through the provision of social, athletic, academic and professional events and services.

**Someone he looks up to:** Jon Snow, for coming back to life and becoming King in the North.

**Favourite quote:** Carpe diem

**Contact him:** ups@uoftpharmacy.com

ALEXANDER MOK, 1T8

**His role:** Helps plan the First Year Orientation Banquet, is Chair of the Students Initiative Fund, and part of the Points & Awards Committee. Also puts together the Key and coordinates the Annual Awards Night.

**Someone he looks up to:** My grandfather, a hard-working Sicilian who came to Canada with nothing and started his own business while raising and supporting his family. He now tends to his garden and wins the annual Garden of the Year Award in Richmond Hill.

**Favourite quote:** "I'm going to make him an offer he can't refuse." - Vito Corleone

**Contact him:** ups@uoftpharmacy.com



VICE PRESIDENT

ONELLA PEREIERA, 1T9



EXECUTIVE SECRETARY

**Her role:** Keeps track of Council meetings, makes sure students receive their UPS points, and ensures tasks are done as efficiently and as swiftly as possible. She also works closely with student clubs, and the Student Initiative Fund (SIF), so feel free to send her a message if you're interested in starting a new club.

**Someone she looks up to:** Mindy Kaling, because she makes important issues relevant and relatable. She is also the perfect array of dorky, intelligent, charming, and witty - PLUS she has an amazing fashion sense!

**Favourite quote:** "If you don't see a clear path for what you want, sometimes you have to make it yourself." - Mindy Kaling

**Contact her:** secretary@uoftpharmacy.com

ARPIT CHHABRA, 1T8

**His role:** Accounts for all the large sums of money entering and leaving UPS accounts, and resists the urge to withdraw it all just to lay on a bed of cash... you know, like the guy from Breaking Bad.

**Someone he looks up to:** Francis Mallmann, for where he lives, what he creates, and how he leads.

**Favourite quote:** "If you're moving with amazements in your eyes, impatiences in your heart, then you are alive." - Javed Akhtar

**Contact him:** finance@uoftpharmacy.com



SENIOR FINANCE DIRECTOR



JUNIOR  
FINANCE  
DIRECTOR

CARMEN CHEUNG, 1T9

**Her role:** She helps deal with the money.

**Someone he looks up to:** Emma Watson. She's classy, talented, intelligent, and successful, but most importantly, she takes advantage of her celebrity status in a positive way by being an activist and advocating for important global issues, such as Women's Rights and Gender Equality.

**Favourite quote:** "Patience is a virtue."

**Contact her:** finance@uoftpharmacy.com

**Her role:** Works to secure sponsorship funding for the UPS to run events. She also organizes Lunch and Learns and work with a company called CU Advertising, which helps keep our school publications cost at a minimum by offering potential sponsors advertising opportunities.

**Someone she looks up to:** My mom, because she's a wonderful and talented woman.

**Favourite quote:** You had me at brunch.

**Contact her:** external@uoftpharmacy.com

HALINA LAM, 1T8



SENIOR  
EXTERNAL  
AFFAIRS  
DIRECTOR

HATF SOHAIL, 1T9

**His role:** Works together with Halina to secure and maintain sponsorships and donations from external organizations to fund UPS events. In addition, he chairs the outreach committee and is the Student Liaison for the Canadian Society of Hospital Pharmacists (CSHP).

**Someone he looks up to:** Muhammad Ali because he stood up for what was right and never backed down from a challenge.

**Favourite quote:** "Float like a butterfly, sting like a bee." - Muhammed Ali

**Contact him:** external@uoftpharmacy.com



JUNIOR  
EXTERNAL  
AFFAIRS  
DIRECTOR

**Her role:** Responsible for organizing the pharmacy intramural teams, the faculty-wide athletic events such as tug-o-war, curling bonspiel, dodgeball tournament, student vs. faculty games and the athletic events against the University of Waterloo School of Pharmacy (soccer cup and OPA hockey cup).

**Someone she looks up to:** Simon Whitfield

**Favourite quote:** "Run the day, don't let it run you."

**Contact her:** athletics@uoftpharmacy.com

ÉLISE DE FRANCESCO, 1T8



SENIOR  
ATHLETICS  
DIRECTOR

SYLVIA KONG, 1T9

**Her role:** Helps make all intramural sports and Ontario Pharmacy Cup events happen!

**Someone she looks up to:** My mother because she is a crazy super woman who always executes her ideas regardless of being supported or not. Nothing can depress her passion and determination for her dreams.

**Favourite quote:** "Count your blessings not your problems."

**Contact her:** athletics@uoftpharmacy.com



JUNIOR  
ATHLETICS  
DIRECTOR

MARIA MORENO, 1T8

**Her role:** Oversees the running of all CAPSI local events such as the CAPSI competitions and Pharmacist Awareness Month.

**Someone she looks up to:** My mom, because she influenced me in a positive way and shaped me to be who I am today.

**Favourite quote:** "Don't wait for someone to bring you flowers. Plant your own garden." - Mario Quintana.

**Contact her:** torontosr@uoftpharmacy.com



SENIOR CAPSI  
REPRESENTATIVE



JUNIOR CAPSI  
REPRESENTATIVE

NISHA GAJARIA, 1T9

**Her role:** Works with Maria to help run the CAPSI activities that happen at U of T.

**Someone she looks up to:** My dad, because he has an amazing work ethic and is always looking out for others.

**Favourite quote:** "Everything is relative."

**Contact her:** torontojr@uoftpharmacy.com

KRISTA CHAU, 1T8

**Her role:** Along with Aveline, Krista livens up the pharmacy student life by planning major events during the school year such as the Interprofessional Boat Cruise, Phollies, and Semi-Formal.

**Someone she looks up to:** JK Rowling, for being able to so clearly express amazing ideas and feelings into words.

**Favourite quote:** "Do unto others as others do unto you."

**Contact her:** events@uoftpharmacy.com



EVENTS  
CO-DIRECTOR



EVENTS  
CO-DIRECTOR

AVELINE TUNG, 1T8

**Her role:** Along with Krista, Aveline helps invigorate the pharmacy student body by helping plan the Boat Cruise, Phollies and Semi-Formal.

**Someone she looks up to:** My parents, because they did good by me and raised me right!

**Favourite quote:** E.E. Cummings's poem, "I Carry Your Heart"

**Contact her:** events@uoftpharmacy.com

ADRIANA TOO, 1T8

**Her role:** Acts as a liaison between UTSU and UPS. Represents the University of Toronto Students' Union (UTSU) at UPS meetings and speaks for the Faculty of Pharmacy at UTSU board meetings.

**Someone she looks up to:** My mom, because she can turn any piece of garbage into something useful :D

**Favourite quote:** "Those who mind don't matter, and those who matter don't mind."  
- Dr. Seuss



UTSU  
REPRESENTATIVE



PHARMAKON  
CO-EDITOR

STEVEN GUAN, 1T9

**His role:** Along with Alexandra, Steven is in charge of bringing you the pharmacy year-book.

**Someone he looks up to:** Bill Wattersom, for creating Calvin and Hobbes.

**Favourite quote:** "Ideals are peaceful, history is violent." - *Fury*

**Contact her:** pharmakon@uoftpharmacy.com



PHARMAKON  
CO-EDITOR

ALEXANDRA KOURKOUNAKIS, 1T8

**Her role:** Along with Steven, Alex also points her camera at people and places and click buttons furiously, later toils for hours to make everyone look fabulous!

**Someone she looks up to:** Emma Watson, not only because she is the lead actress of my favourite childhood movie series, but also because she's a brilliant woman who has become a United Nations Women's Goodwill Ambassador. She fights for a cause she is truly passionate about, and I can only hope that I will be as driven to accomplish my own goals as she is.

**Favourite quote:** "You don't take a photograph, you make it." - Ansel Adams

NAOMI LO, 1T8

**Her role:** Along with Natalie, Naomi helps publish the Monograph, which is the pharmacy newspaper written by the students, for the students!

**Someone she looks up to:** Craig Kielburger, for inspiring so many with his passion, determination and kindness.

**Favourite quote:** "People will forget what you said, people will forget what you did, but people will never forget how you made them feel." - Maya Angelou

**Contact her:** monograph@uoftpharmacy.com



MONOGRAPH  
CO-EDITOR



MONOGRAPH  
CO-EDITOR

NATALIE TERNAMIAN, 1T8

**Her role:** Along with Naomi, Natalie helps write, edit and string together the Monograph for the student body.

**Someone she looks up to:** People who use their talents, power, position or opportunities, for good.

**Favourite quote:** "Don't compare your beginning to someone else's middle." - Jon Acuff

**Contact her:** monograph@uoftpharmacy.com

VINCENT NGUYEN, 1T9

**His role:** Helps make eye-catching ads that you see on campus, Facebook and Instagram to sure you're in the know of all events happening in Pharmacy!

**Someone he looks up to:** Magikarp, because even though all he does is splash, he can become a Gyarados.

**Favourite quote:** "Real or not real?"

**Contact him:** marketing@uoftpharmacy.com



MARKETING  
CO-DIRECTOR



MARKETING  
CO-DIRECTOR

JEFFREY TSO, 1T8

**His role:** Helps Vincent make things pretty.

**Someone he looks up to:** Ash Ketchum, because no one can stop him from achieving his dreams.

**Favourite quote:** Just do it.

**Contact him:** marketing@uoftpharmacy.com



WEBMASTER

LINDA XI YANG, 1T8

**Her role:** Updates the UPS website, keeps track of the summer package mailout and phrosh form entries, sends out pharmacy Listserv emails, and moderates the UPS points system.

**Someone she looks up to:** Moms, because they are the masters of multitasking, persevering and mind reading.

**Favourite quote:** "Someone is sitting in the shade today because someone planted a tree a long time ago." - Warren Buffett

**Contact her:** webmaster@uoftpharmacy.com

ERIN CICINELLI, 1T7

**Her role:** Works closely with the 1T7 Class Council to deliver awesome career and residency events as well as a spectacular graduation formal.

**Someone she looks up to:** My mom, because she has passion for her work, a generous heart, and a kind spirit!

**Favourite quote:** "Come, seek, for search is the foundation of fortune: every success depends upon focusing the heart." - Rumi

**Contact her:** 1t7@uoftpharmacy.com



1T7 CLASS  
PRESIDENT



1T7 CLASS  
VICE PRESIDENT

JASON YUNG, 1T7

**His role:** Conducts the faculty wide clothing, name-tag, and lanyard sales. During the year, he helps organize the Prof. Auction and Charity Week. He attends Dean's meetings to represent the Class of 1T7 and brings student concerns to the attention of the faculty.

**Someone he looks up to:** Shaninder Nirula. Do I really need to explain why?

**Favourite quote:** "People won't care how much you know until they know how much you care." - John C. Maxwell

**Contact him:** 1t7@uoftpharmacy.com

SARA TAWADROUS, 1T8

**Her role:** Keeps council focused, motivated and passionate to serve the class of 1T8!

**Someone she looks up to:** The people who do things with unrelenting focus, despite the obstacles or failures, inspire me.

**Favourite quote:** "Do small things with great passion."

**Contact her:** 1t8@uoftpharmacy.com



1T8 CLASS  
PRESIDENT



1T8 CLASS  
VICE PRESIDENT

VIVIAN TANG, 1T8

**Her role:** Works with Sara and the rest of the Class Council to ensure that the 1T8 class has a wonderful 3rd year full of events, food, and prizes. She also plans the CPR recertification courses and Charity Week in November.

**Someone she looks up to:** My mom, because she taught me to never give up and to believe in myself.

**Favourite quote:** The trick is to not let people know how really weird you are until its too late for them to back out.

**Contact her:** 1t8@uoftpharmacy.com

1T9 CLASS  
PRESIDENT

BRYANNA TIBENSKY, 1T9

**Her role:** Works closely the class council to ensure to that all events and council affairs run smoothly! This past summer, she helped plan the 2T0ronto Phrosh Week, as well as the upcoming 2T0 Orientation Banquet.

**Someone she looks up to:** My mom, for her strength and positivity.

**Favourite quote:** "Isn't it funny how day by day nothing changes but when you look back everything is different." – C.S. Lewis

**Contact her:** 1t9@uoftpharmacy.com

STEVEN SHAO, 1T9

**His role:** Organizes Phrosh Week, CPR Certification, and first-year council election. He also answers the questions and concerns of the 2T0 class. Throughout the year, his focus shifts towards creating a memorable second year for the 1T9s.

**Someone he looks up to:** Everyone who is better than me in the areas I'm interested in. I just want to become my best possible self :)

**Favourite quote:** "We are what we repeatedly do. Excellence, then, is not an act, but a habit." – Aristotle

**Contact him:** 1t9@uoftpharmacy.com

1T9 CLASS  
VICE PRESIDENT

2T0 CLASS PRESIDENT *and* 2T0 CLASS VICE PRESIDENT :  
**To Be Determined**

PAST  
PRESIDENT

TIANA TILLI, 1T7

**Her role:** Provides input on council activities based on her past three years' experience on the UPS Council. She also co-organizes the OPSIS conference in March 2017, so keep an eye out for that!

**Someone she looks up to:** Rosalind Franklin, because she made significant contributions to science at a time where being a female in the field was particularly difficult.

**Favourite quote:** "Think of all the beauty still left around you and be happy." – Anne Frank

**Contact her:** pastpres@uoftpharmacy.com

TANNER WARREN, 1T9

**His role:** Sits on the Ontario Pharmacist's Association (OPA) Board of Directors, advertises and organizes OPA events such as Dinner and Learn sessions and the OPA Cup, promotes OPA membership, and acts as a liaison between the student body and the OPA.

**Someone he looks up to:** My grandfather, for always having a sense of humour and being a source of optimism and ingenuity.

**Favourite quote:** "Take chances, make mistakes, get messy." – Miss Frizzle

**Contact him:** opa@uoftpharmacy.com

OPA STUDENT  
BOARD MEMBER

ALEKSA STANKIC, 1T8

**His role:** Offers all an equal opportunity to speak at UPS meetings.

**Someone he looks up to:** Aldous Huxley

**Favourite quote:** "Go where people sleep and see if they are safe." – Jenny Holzer

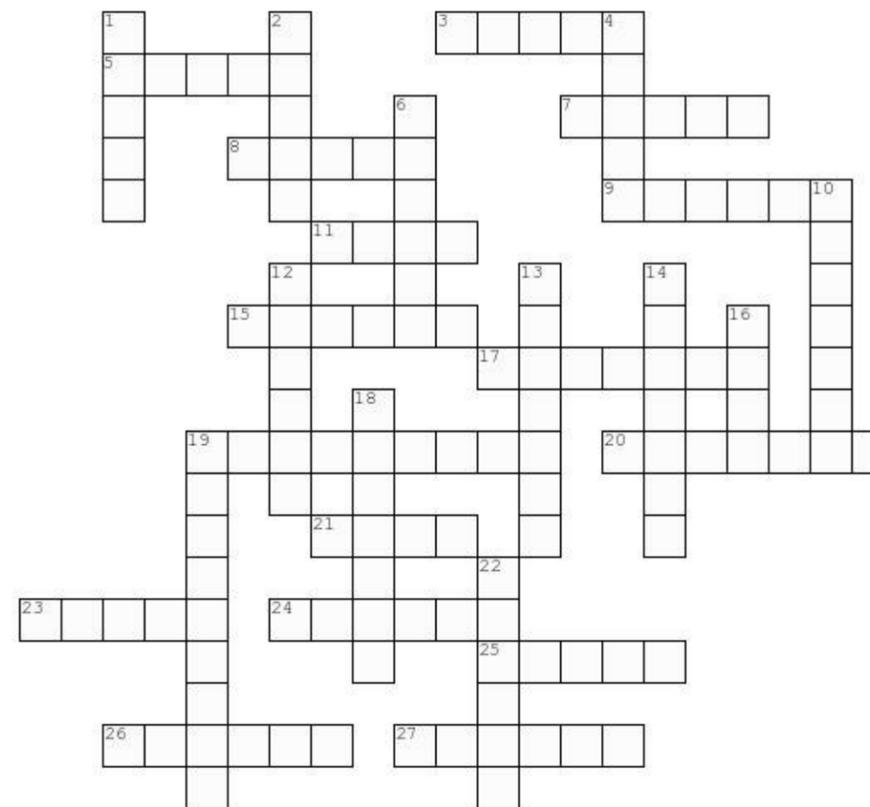
**Contact him:** speaker@uoftpharmacy.com



SPEAKER

## UPS COUNCIL MEMBERS QUIZ

Think you've got all the positions down pat? Test your knowledge by finishing the crossword below!



### Across

3. Senior Finance Director
5. Webmaster
7. 1T7 Class President
8. Monograph Co-Editor
9. Speaker
11. 1T7 Class President
15. Senior External Affairs Director
17. 1T9 Class President
19. Pharmakon Co-Editor
20. Marketing Co-Director
21. 1T8 Class President
23. Senior CAPSI Representative
24. Events Co-Director
25. Junior CAPSI Representative
26. Pharmakon Co-Editor
27. Executive Secretary

### Down

1. Senior Athletics Director
2. UPS President
4. Past President
6. 1T8 Vice President
10. Events Co-Director
12. Junior Finance Director
13. UTSU Representative
14. Marketing Co-Director
16. Junior External Affairs Director
18. Monograph Co-Editor
19. UPS Vice President
22. OPA Student Board Member

## NEW FEATURES THIS YEAR!

We are proud to bring you these new features to the Monograph:

### 1. QR Codes

### 2. Coupons

### 3. Online Access

### 4. Advice Column

Submit your questions here: [https://docs.google.com/a/uoftpharmacy.com/forms/d/e/1FAIpQLSc3wmj8fC\\_n94QDW0LuvQcK-peTqDnn84q5ZAc8Tp-ME2ByzINQ/viewform](https://docs.google.com/a/uoftpharmacy.com/forms/d/e/1FAIpQLSc3wmj8fC_n94QDW0LuvQcK-peTqDnn84q5ZAc8Tp-ME2ByzINQ/viewform)

**T**he Anti-Calendar is the non-official handbook for all the required and elective courses in the PharmD program. Written by students themselves who have taken these classes, it offers candid insights and practical advice about learning the course content, studying smarter, and passing (and acing!) exams. So without further ado, grab your coffee or tea and take a look at our 2016-2017 edition of the Anti-Calendar:

*Please note: The instructors and class averages provided are from the 2015-2016 academic year, and thus may not be applicable for this year.*

### **ANTI-CALENDAR 2016-2017: FIRST YEAR**

*Author: Vaishali Sriprathap, 1T9 Monograph Class Representative*

#### **PHM 101: PHARMACOTHERAPY 1: FOUNDATIONS AND GENERAL MEDICINE**

Instructors: S. Yamashita and A. Woods

Class Average: B

The course, also called “Gen-Med,” aims at educating students about theories common to practicing health-care professionals. It is a very interesting course that focuses on a plethora of topics, some of which include osteoporosis, insomnia, and constipation. You are evaluated on a Care-Plan handed in approximately twice a semester, open discussions and written examinations. Lectures are not traditional, and includes an interactive seminar component. The midterm and final are based on all assignments and seminars. Therefore it is important to pay attention and take detailed notes on everything. Apart from the examinations, this information will be very important while you do your EPE-1, so make sure you take notes and retain the knowledge!

#### **PHM 105: MEDICATION THERAPY MANAGEMENT 1**

Instructor: J. Ahmad

Class Average: B-

Also called MTM for short, this is a course with light lectures, but heavy lab work. Every week, a list of 8-9 drugs are given, and one has to prepare a chart of counselling points before the lab. This task becomes much easier when done with a group of friends. In the lab, you have to assume the role of a pharmacist, and begin working on a few tasks, with the help of the Kroll software. Once this part of the lab is done, you and a few other classmates will be taken into a room where you will have to counsel a patient (usually a TA who is acting) on the medication you were assigned. Marks are given for hitting all the key points, and keeping a professional, natural, and approachable attitude! It may be hard for some who do not enjoy verbal interactions, but it becomes substantially easier after the first few labs. There is also a midterm and final exam which cover all readings, lectures, and lab work.

#### **PHM 110: HEALTH SYSTEMS I**

Instructor: N. Pojskic

Class Average: B-

This is a course summarizing the basics of the Canadian healthcare system’s regulations and finances. There are 2 written assignments, a midterm, and a final examination. The writing assignments require a lot of knowledge on the topic, so it is necessary that you start all readings early on in the course. It’s also very important to have a rough draft ready early on, as peer-editing can help you alot. For students who are may need tips for writing, TAs and professors are always willing to help during office hours. The University of Toronto has a very helpful Health Sciences writing centre, where you can book appointments to review your assignments ahead of time!

#### **PHM 113: PHARMACY INFORMATICS**

Instructor: M. Rocchi

Class Average: A-

A partially online class, Pharmacy Informatics discusses the use of technology in practice, and a variety of electronic health record systems. You will have a chance to learn all parts of the CPS, ODB formulary, Lexicomp, Lexi-interact, and many other resources. Through Camtasia, you can view the online lectures, and this can be done at your own pace. This is an extremely useful course as it teaches you how to use online resources, something that you will need to use on a daily basis for the rest of your pharmacy career.

#### **PHM 114: SOCIAL AND BEHAVIOURAL HEALTH**

Instructors: A. Thompson and Z. Austin

Class Average: B+

This class is split into two portions: Module 1 and Module 2. The first is run by Professor Thompson, and the second by Professor Austin. Module 1 focuses on ethical decisions one needs to make in the professional workforce as well as conflicts of interest that may arise. Module 2, focuses more towards psychology and the different theories of learning. Some of this information may seem very familiar from undergrad, but this course adds a pharmacy twist to all the concepts learned! The course becomes more interesting with this added element, and is also extremely useful when counselling patients! The assessments are more case based, and require applied knowledge, so memorizing facts won’t get you too far. Try to instead focus on the bigger ideas, understanding concepts, and this course will become almost second nature!

#### **PHM 130: PHARMACEUTICAL CALCULATIONS**

Instructor: A. Mejia

Class Average: Pass/Fail

This course teaches you most of the fundamental calculations that you will be doing as a pharmacist. One needs to know how to dilute, mix, and separate; all in correct proportions. Although this course is not challenging, and works on a pass/fail basis, you do need to receive 100 percent on the second midterm to pass the course. Plenty of homework problems are assigned, and the tests are all open book, so getting that perfect score on the second midterm is not as impossible as it seems!

#### **PHM 140: MOLECULAR PHARMACOLOGY**

Instructors: J. Wells, S. Angers, C. Cummins, and P. Backx

Class Average: B-

This is definitely a content heavy course, but not as horrible as many make it sound! The class itself is split into 4 sections. There is quite a large amount of content in this course, but attending lectures, taking detailed notes, visiting office hours, and practicing questions will prove to be extremely helpful. In terms of assessments, there are 2 midterms and a final examination! One of the TA’s (Arthur Li) has made a series of helpful youtube videos to explain many sections of the course, so be sure to check them out! Keep in mind that this course is definitely not one where you can pull an “all-nighter”, or slack off. Another quirk of this class, is that there are students from other departments taking the course, and the lecture hall tends to become extremely full. Better be there a bit earlier if you want your usual seat!

**PHM 141: PHARMACEUTICS**

Instructors: R. Macgregor, T. Chalikian and S. Pang  
Class Average: B+

This course summarizes the basics of what makes up medications, and how they are made. It is generally a lighter course and students can do very well if moderate effort is put. The slides are easy to follow and professors are very helpful. Pharmacokinetics tends to come up again here, so a bit of background knowledge from first semester goes a long way! Some of the slides and long formulae may seem intimidating, but remember that most of them are given to you during tests! The midterm and final are very fair and can be done very well if one is well prepared. This class is definitely an eye opener and changes your perspective on how much thought is put into the design and production of medications!

**PHM 142: METABOLIC BIOCHEMISTRY AND IMMUNOLOGY**

Instructors: J. Henderson and D. Hampson  
Class Average: B

This class is split up into two different sections, just as the name suggests; Metabolic Biochemistry and Immunology. With J.Henderson, most of the information you need will already be present on the slides! On the other hand, Professor Hampson teaches differently and uses the slides as mere guides to what topic he is talking about. It is therefore very important to attend classes and understand all the supplemental information. Immunology can seem a bit challenging, especially for those who may have gotten used to the previous professor's teaching style, but fear not! Writing good notes, and understanding main concepts is crucial in doing well! Also keep in mind, that although a few of your classmates may have taken courses on immunology, it's the first time for many students, and a majority of them find the course fairly easy.

**PHM 143: PATHOBIOLOGY AND PATHOLOGY**

Instructor: R. Bendayan  
Class Average: B

Just as the name suggests, it is the study of the behaviours of a disease. Also referred to as "patho" by peers, each lecture covers a different disease, and its traits. Every lecture also has a different lecturer, who is specialized in that field, so it may be difficult to adjust to a changing lecture style. It's very common to find things you've learned in other classes come up again here as well! The course itself is very content heavy, with a few difficult multiple choice questions coming up on the midterm. It's very important to not procrastinate and make sure to plan your studying well in advance for this course! At the very end of this course, Professor Bendayan starts a quick unit on our renal system. Although she goes extremely fast and lecture slides are loaded with large amounts of information, going through the slides again is very helpful for the exam. Professor Bendayan's classes are also extremely interactive, encouraging you to pay attention and learn the information, so her lectures are something you definitely don't want to miss!

**PHM 144: PHARMACOKINETICS**

Instructors: C. Cummins, J. Uetrecht, D. Dubins and R. Bendayan  
Class Average: B+

Here's a course that seems to be tough on the surface, but becomes extremely simple after rereading the slides. This course, can be summarized into 4 words: absorption, distribution, metabolism and excretion. The four professors handle different aspects of the course and will take you through these 4 concepts. There is a lot of math and analyzing graphs involved, but as you understand the material, you may see a few similarities with an undergraduate thermodynamics course! Many of the concepts are already well-known by students, but just given a more fancy "pharmaceutical" name, to match the context of the course. Overall, it's a fair course if you are able to tie the more complicated systems to simpler ideas, and follow along with lectures! The professors themselves are amazing, and they will make sure they have your undivided attention.

**PHM 145: HUMAN HISTOLOGY AND ANATOMY**

Instructor: D. Ballyk  
Class Average: B+

This class may be the only class you take this year that doesn't specifically refer to pharmacy in lectures. It is a general anatomy class focused on giving you the minute details, and locations of all parts of the body. The assessments are 3 non-cumulative tests that are weighted equally. Be aware that the content does tend to become more dense as the course progresses, so studying for the 3rd assessment may actually take longer than for the first midterm! If you stay on top of the lectures and study well in advance for the lectures, you will do great in this course!

**PHM 146: FUNDAMENTALS OF PHARMACOLOGY**

Instructor: M. Erclik  
Class Average: A-

This course teaches you about drugs and their binding targets. This may seem like a simple course at first, but the latter half of the class is more content heavy, so it's important to stay on top of your work! This information also comes in handy second semester when you have to take molecular pharmacology. You will have a chance to learn about different types of drugs, their classes, their binding sites, and their physiological effects. The lectures are very exciting with real-life experiences and stories mixed into the lecture. The assessment is based on the content in the lecture slides, so be sure not to miss class! Also keep in mind that, although there are only a few powerpoints, the professor goes into great detail for every class of drug, so it's important to remember all the details, and take thorough notes!

**PSL 205: BASIC HUMAN PHYSIOLOGY (ONLINE COURSE)**

Instructor: N. Kee  
Class Average: B

This course will give you an overview of how all systems in our body work. Unlike all other courses, all lectures are completely online. But this doesn't mean they can be done at your own pace. To ensure that students keep up with the course work, a section is posted and taken down every week. This is done so students do not fall extremely behind on all the lectures that need to be completed, thus it is important to stay on top of all lectures! The professors themselves are very interactive and bring in a few anecdotes to make the study more interesting. For assessments, you will have two online quizzes, a midterm and a final examination, all of which are multiple choice. If you make sure to keep on top of all the powerpoint lectures, this becomes an interesting course that you learn a lot of interesting facts from!

**ANTI-CALENDAR 2016-2017: SECOND YEAR***Author: Brett Hevenor, 1T8 Monograph Class Representative***PHM 201: PHARMACOTHERAPY 2: DERMATOLOGY AND EENT**

Instructors: D. Sibbald and A. Narducci

Class Average: B+

This course contends with Microbiology of Infectious Diseases for most “cannot-be-unseen” slides. However, as future health professionals, we must be able to interact with patients with these disease states in a professional manner. This means overcoming guttural reactions including but not limited to: shock, fear, nausea, and vomiting. The course itself requires significant effort put in to succeed, but tests are (according to the professors) based around the important information. This generally falls under the categories of practical questions you might receive from patients about proper use of medications, first/second/third line therapies, etc. Debra Sibbald is the faculty’s advisor on MCQs, and her MCQ’s are often chock-full of detail. Expect lots of them. Memorize everything. When it’s your turn to be on a panel, just be prepared and everything will be fine.

**PHM 202: PHARMACOTHERAPY 3: ENDOCRINOLOGY, NEPHROLOGY AND UROLOGY**

Instructors: M. Battistella and H. Halapy

Class Average: B

This is the archetypal PCT course, and deservedly so. Thorough work-ups and care plans are a must. Workshops are engaging and actually pretty interesting, as both professors have plenty of real experience with all the conditions covered. Workshops are also a great place to get tidbits before midterms and exams, so show up, participate, and pay attention!

The quality of the lecture varies based on who the guest lecturer is, but for the most part are also engaging. Again, each topic is the lecturer’s bread and butter, so throw questions their way as much as possible! And all of their slides are pretty thorough anyway. Study them early and often, as the material is in depth. The diabetes seminar is nerve-wracking but fun. Don’t be afraid of over-studying the diabetes seminar package and readings, because diabetes is a key focus this semester and is a topic you should be comfortable with as a pharmacist.

**PHM 203: PHARMACOTHERAPY 4: INFECTIOUS DISEASES**

Instructors: N. Dewhurst and G. Wong

Class Average: B-

A heavy workload course in a heavy workload semester (winter term), but very important for your future career as a pharmacist, regardless of what type of site you practice at. The three pillars of this course are drug, condition, and pathogen. To truly ace this course you’ll have to be able to start at any of the three pillars and explain the rest from there. For example, given a drug, explain its spectrum of activity, which diseases those bugs commonly cause, and where the drug is in the hierarchy of choices when presented with a complex patient with one of those disease states. If this sounds complicated, it’s because it is, so don’t put off getting familiar with the material. This is especially true of Dr. Linda Dresser’s general drug lectures, which will seem like a bizarre barrage of information at first exposure (kind of like Dr. Utrecht’s first metabolism lectures in PK). However, there is no need to fret, since you have some of the best critical care pharmacists in Toronto helping you wrap your head around it, including 1T8’s Year 2 Prof. of the Year, Dr. Norman Dewhurst. Dr. Gary Wong has also been known to spend as much time as needed discussing with students, so utilize their wisdom and knowledge as much as you can. Make sure to get all the information from each workshop, as that’s where the real meat of the course is.

**PHM 204: PHARMACOTHERAPY 5: CARDIOVASCULAR DISEASES**

Instructors: N. Crown and H. Kertland

Class Average: B

A beef jerky course (i.e. tough, dry, salty), but rewarding in the end. This course covers all kinds of important material, and some of the most common drugs you’ll see in practice (medications for hypertension in community pharmacy and for DVT prophylaxis in hospital). Because of this, it is important to know this material front and back, as it will show up as comorbidities in many cases moving forward. You will presumably have the “Wiki” again this year, which despite giving you lots of information, is a terrible study tool, unless you edit it down to a good one. Make sure you take note of the important parts of each entry when going over the Wiki in workshop. The professors are quite amicable and fair though, so each lecture and workshop is a welcoming environment for participation and discussion. Some people have said that this course was their favorite of the year.

**PHM 205: MEDICATION THERAPY MANAGEMENT 2**

Instructors: J. Elias and K. Tan

Class Average: Pass/Fail

I hope you enjoyed your MTM 1, because you have another heaping helping coming your way. Things like order entry, verbal orders, and counselling are expected to be second nature, and a care plan component replaces the drug info question from MTM 1. This entails reading a case, finding DTPs, and writing out therapeutic alternatives, justifications, etc. The key here is to type, read, and comprehend quickly and accurately. Talking to professors for feedback is always a good idea, as is going to the lab for practice sessions (i.e. counselling with inhalers, or to work on a confident speaking style). There’s a milestone lab at the end in lieu of a written exam, so you can focus on studying for the PCT classes as soon as it’s done. Good luck, and just be yourself!

**PHM 206: MEDICATION THERAPY MANAGEMENT 3**

Instructor: J.Kellar

Class Average: Pass/Fail

Consisting entirely of counselling, this course is all about building rapport with patients, their family members, other healthcare professionals, or whoever else the actor happens to be playing for your encounter. Clinical accuracy is assumed, so prepare like you would for any MTM counselling. Standardized actors will give you invaluable feedback on your communication skills, and pharmacists will observe and ensure you give proper advice. The most important thing is not harming the patient, so don’t take any guesses and you’ll do fine. Hopefully you’ll have Jamie Kellar as your course coordinator like the 1T8s did, because she is passionate about pharmacy education (also ask her about her research, it’s fascinating!) and will do everything she can to help you excel at this course.

**PHM 212: RESEARCH METHODS FOR PHARMACY**

Instructor: A. Taddio

Class Average: B+

Research Methods is a course that is exactly what it sounds like. Look forward to learning the ins and outs of evidence-based medicine and the pharmacy profession's role in it. This course ends up being a love-it-or-hate-it course, based on how inclined you are to consider doing research in your future career. However, an appreciation and understanding of that research is integral to any career where looking up studies and critically appraising them is important (i.e. nearly every career path for pharmacists). Exams are pretty straightforward, so know your own learning style to determine how you'll best understand the info (hint: most people should do the samples ahead of each class- most people don't). Critical appraisal is a skill that you have to develop, so don't expect to be able to cram and do well.

**PHM 213 HEALTH ECONOMICS AND PHARMACOECONOMICS**

Instructors: P. Grootendorst and M. Papadimitropoulos

Class Average: A-

Most people loved this class since it was so different from every other course in the program. Prof. Grootendorst takes you on a hilarious and informative ride from the basics of economics all the way through to contemporary issues in health and pharmacoeconomics, with plenty of examples along the way. He also makes sure that the course doesn't move at too fast of a pace, which is nice since it's an entirely new field to most of us. Dr. Papadimitropoulos brings expertise and personal experience in industry to the class as a fresh perspective. He then outlines a little bit about how health economists make appropriate models and how to critically appraise their publications (just when you thought Research Methods was over!). Overall a fair and satisfying class, easy enough to do well in with appropriate attention paid to it.

**PHM 215: MANAGEMENT: SKILLS, COMMUNICATION AND COLLABORATION**

Instructor: M. Sullivan

Class Average: B-

Ah, Management. Every 1T8 probably has their own opinion of it, but a little controversy is good now and then, if only to shake things up. Assuming Mike Sullivan is back again next year, this class will no doubt be something to look forward to each week. Prof. Sullivan brings the perfect blend of humor, honesty, and insight into workplace and management issues. By being trained as a pharmacist, holding a business degree, and having many years of experience founding and helming Cubic Health (an independent analytics company), he brings a unique perspective to the class. He is also honest about wanting to hear the class' thoughts and feedback, so don't hold back. Expect some guest lectures by Zubin Austin too, which is always a treat. As for the material, pay attention to the point of each slide, and really try to fit it into everything else you know when applying it the assignment. To succeed on the final, the only advice I can give is to memorize every slide with a list (and every slide in general), but be able to explain what each entry on each list really means.

**PHM 230: PHYSICAL ASSESSMENT AND INJECTION TECHNIQUES**

Instructor: E. Cambly

Class Average: B+

Overall one of the more fun classes in your busiest semester yet, Physical Assessment (also known as "Nursing") consists of a series of lectures on the assessment of different bodily systems and a laidback lab component where those principles are put into action and practiced on one another or teaching aids. Professor Cambly is friendly and concise, making for a great lecture experience. The injection lab is fun and interesting as well, but make sure to take some quick notes about the names of the landmarks involved in each injection. Or find this material in the readings, it's up to you. For the exams, it is VERY important that you do the readings and sample questions, as some of the material is directly drawn from there (as in it's not all from the slides, like some other classes).

**PHM 240: THE SCIENCE OF PHARMACOTHERAPY**

Instructors: L. Burry and S. Walker

Class Average: B-

Each lecture has a group of students sit in a line at the front of the lecture hall, responding to questions from the guest lecturer of the week. Don't worry though, you're given all of the questions ahead of time. Since you don't know which of the questions you'll be asked, it is important to be familiar with all of the answers for your section (therefore set up a Google Doc with your group and work on them all together! But make sure to double check your group members' answers!). This class tests your ability to find the right answer on the Internet, which is always a great skill to have. The exams in our year were kind of controversial in terms of the values of marks assigned to each question (all short answer), so if that happens again, just put down everything you know about the topic! Otherwise, the content is easily understandable, but there's a lot of it.

**PHM 241: TOPICS IN PHARMACEUTICAL QUALITY AND CLINICAL LABORATORY MEDICINE**

Instructors: D. Dubins and R. De Souza

Class Average: A-

It's hard to not like Dave Dubins. He controls the lab portion of the course, where principles of pharmaceuticals are put to the test. The important things to remember here is to study for the pre-lab quizzes, since they're worth a lot, and to start your formal lab early, because that time of year gets busy fast. Rounding out the dream(y) team is Dr. De Souza, whose positivity and humor made the lectures fun to attend (and the material was actually really interesting too). This was another straightforward course that most students were satisfied with.

**PHM 242: MICROBIOLOGY OF INFECTIOUS DISEASES**

Instructor: I. Crandall

Class Average: A-

Definitely a fun course with a fun professor who genuinely enjoys being with the class discussing his favorite topics. If Dr. Crandall looks familiar, you may be remembering him from his hilarious jokes just before the MMI interviews. It'll be hard to not find his positive attitude infectious. The slides here are probably the clearest and most straightforward of any class. Memorize (but don't cram) and get over 90 easily. The infectious agents covered in this class show up again in PCT 4, and sometimes in the news, so make sure to pay attention to their epidemiological roles in history and society.

**ANTI-CALENDAR 2016-2017: THIRD YEAR***Author: Leyla Warsame, 1T7 Monograph Class Representative**Contributors: Hala Al-Hasan, Sarah Barnett, Erin Cicinelli, Angela Fok, Philip Kim,**Anish Krishnan, Rachel Liu, Komail Nadeem, Nhi Nguyen, Saliha Syeda, Matthew Yu, and Areeba Zaheer (1T7)*

*\*\*These courses were either not offered last year or had minimal feedback, thus faculty descriptions of these courses (<http://www.pharmacy.utoronto.ca/pharmd/year-3-course-descriptions>) are provided for reference.*

**A) Required Courses:****PHM 301: PHARMACOTHERAPY 6: HEMATOLOGY, ONCOLOGY AND IMMUNOTHERAPIES**

Instructors: C. De Angelis and M. Leung

Class Average: B

This is one of the heavier PCT courses where you will be introduced to not only cancer treatment, but also supportive therapies commonly prescribed to cancer patients and dispensed in community pharmacies. The latter half of the course focuses on non-cancer related immunotherapies for disease states like rheumatoid arthritis. The course consists of weekly workshops, quizzes on online content and in-class lectures including a midterm and final exam. You'll feel like there is always something to do but keeping up with the workload from week 1 will make all the difference.

**PHM 302: PHARMACOTHERAPY 7: NEUROPSYCHIATRY**

Instructors: J. Kellar and V. Arora

Class Average: B+

One of the more interesting PCT courses covering the most commonly encountered mental illnesses (e.g. depression, bipolar disorder and schizophrenia) and their treatments. Like most PCT courses, there are bi-weekly workshops, quizzes, midterm, final exam and an assignment (worth 20% and marked by pharmacists!). The professors are engaging, thus most students enjoyed this course.

**PHM 305: MEDICATION THERAPY MANAGEMENT 4**

Instructor: M. Rocchi

Class Average: Pass/Fail

The final MTM course requires students to practice all the activities of expanded scope pharmacists. This includes conducting BPMHs, MedsChecks, adapting and renewing prescriptions, assessing and recommending therapies for minor ailments and providing smoking cessation services. The labs were not as stressful as MTM 3, which dealt with finding DTPs and required a lot of preparation. Whereas MTM 4 requires you, as a pharmacist, to be comfortable with expanded scope activities in order to fully practice patient-centered care.

**PHM 310: HEALTH SYSTEMS II**

Instructors: J. Kellar and J. Greiss

Class Average: B

This course introduces a broader range of healthcare topics, such as e-health and comparisons to international health care systems. However, the evaluations (midterm, assignment, final exam) are short answer/essay type questions about critical thinking, analyzing and writing thoughtful justifications. This course requires you to think outside of the box or "at a systems level" as Professor Jamie says. Bottom-line: do not get caught up in the details and visit the Writing center for guidance in your assignments.

**PHM 340: INTRODUCTORY TOXICOLOGY**

Instructor: P. Wells

Class Average: B

Memorizing metabolic pathways, diagrams and being able to explain every step of the biochemical diagrams/pathways you draw is the key to this course. In order to succeed, it is critical to come to class and take detailed notes of the metabolic pathways or reactions that the professor focuses on. The examinations (midterm and final) only ask 1-2 questions about any lecture discussed so make sure to study all topics equally.

**B) Selective Courses:****PHM 350: PHARMACOTHERAPY IN AMBULATORY CARE**

Instructor: J. Hunchuck

Class Average: B+

This course differs from most PCT classes where each class is split between a traditional lecture/slide deck and the latter half being questions on a case. The disease states covered are among the most common in community and ambulatory practice such as diabetes, asthma, COPD, atrial fibrillation and hypertension. There are care plans to be submitted (but the lowest one is dropped) along with a fair and straightforward midterm and final.

**PHM 351: PHARMACOTHERAPY IN INSTITUTIONAL CARE**

Instructor: V. Teo

Class Average: B

This course covers many disease states studied in other PCT courses and how they are treated in a hospital setting. This is a great introduction to many aspects of hospital pharmacy such as VTE prevention protocols, emergency pharmacotherapy, diabetes management in hospital, post-operative pain control and more. The workload is heavy where there are weekly online quizzes on readings from DiPiro, interactive case discussions (twice in a semester), care plans, a midterm and final exam with a mix of MCQ and short answer. There is a mountain of work but it is an essential course to take if you are thinking of going into hospital pharmacy.

**PHM 352: PHARMACOTHERAPY IN OLDER ADULTS**

Instructor: L. Raman-Wilms  
Class Average: B+

This class focuses on disease states that affect aging adults such as Alzheimer's and dementia. Of the PCT courses for specific populations, this is the heaviest in terms of coursework which includes 2 exams, an assignment, quizzes and care plans. The course is taught by multiple lecturers that each specialize on a topic and there is also an interprofessional education event that must be attended by all students.

**PHM 353: PHARMACOTHERAPY IN CRITICAL CARE**

Instructors: C. Chant and N. Dewhurst  
Class Average: N/A

PCT in Critical Care is full of very interesting topics and it'll really get you thinking about how to integrate and apply what you've learned to complex cases. There were two case seminars that really help you to work through and understand the material from lectures. This is helpful because most lectures are dense and run overtime. This course also has a few quizzes and a critical appraisal assignment. Overall, this is a challenging course, but if you put the effort in and stay on top of the work, you'll learn a lot.

**PHM 354: PHARMACOTHERAPY IN PEDIATRICS**

Instructor: J. Chen  
Class Average: B+

This PCT course covered a wide range of topics relating to pediatrics and reinforced the differences between pediatric and adult pharmacotherapy (i.e. dosing calculations, vehicles for administration etc). Pediatrics was a very fair course; the course coordinators made it very enjoyable and really listened to us. There is a project (worth 30%) and both the midterm and final had very straightforward multiple choice questions. The concepts we learned were very applicable in my pediatric rotation. I highly recommend this course to future students!

**PHM 355: PHARMACOTHERAPY IN WOMEN'S HEALTH**

Instructor: T. Brown  
Class Average: B-

This course has 3 different profs, each with unique teaching styles that keep you entertained throughout each class. Professor Brown does not use slides but uploads a 1 minute review of each class on Blackboard, Marko uses slides and Lisa uses slides + online Q&As. Contraception, menopause, pregnancy, infertility, dysmenorrhea, PMS and a whole lot more is covered in this course. Evaluations are straightforward: short answer midterm, final and in-class assignment. The content is not as dense as the other PCT courses but you will be required to know the content inside and out come midterm and finals.

**PHM 360: PERSONALIZED MEDICINE**

Instructor: M. Erclik  
Class Average: A-

Personalized medicine is the way of the future so get ahead by taking this course! The devil is in the details, and CYPs, alleles, phenotypes and genotype frequencies/stats will be important to know. This class starts with lectures from the professor and then switches to student-led presentations where attendance is mandatory. "This class made me realize how complex drug interactions work, like how one drug might increase the level of another, or vice versa. And to be aware of the difference in response to a drug one patient may have vs another."

**PHM 361: LATEST DEVELOPMENTS IN DRUGS AND BIOLOGICS**

Instructor: L. Kotra  
Class Average: A-

Each year Professor Kotra chooses 10-12 new drugs that have been approved the previous year and assigns groups to present to the class everything about that drug, from discovery and formulation, to animal trials and clinical trials. The classes prior to the midterm are taught by the professor but the rest of the classes are all student-led presentations. You may be tempted to sleep in, but paying attention to the questions asked by students, the TA and professor to the group presenting will help you in the final.

**PHM 362: ASSESSING THE BIOAVAILABILITY AND BIOEQUIVALENCE OF MEDICINAL DRUG PRODUCTS**

Instructor: D. Dubins  
Class Average: A-

If you enjoyed the first year PK course or are interested in pharmacokinetics, industry, or research, you may find this course useful, interesting, or both. There are 4 assignments that are due biweekly (although, Prof. Dubins is flexible with deadlines), each worth 7%. The final exam is cumulative and worth ~50%. Participation marks are 5%, and the remainder is the midterm. There really isn't a lot of material to know, so don't worry about the cumulative final. Around 80% of the questions on exams are application based, so memorization is minimal. Simply knowing and understanding the basic principles of bioequivalence should be sufficient. The assignments are straightforward. Sometimes the class can go at a slow pace, but Prof. Dubins' antics usually make it worthwhile. Be warned, there is one "difficult" lecture about modelling multi-compartment models, but with a bit of practice it is doable. Also, for all those who want to avoid public speaking, this is the only course of this selective block with no presentation. I would highly recommend this course.

**PHM 370: COMMUNITY PHARMACY MANAGEMENT**

Instructor: J. Ahmad  
Class Average: B+

Banners, Chains or Independent? If you've ever thought about owning your own pharmacy you have to take this course. Not only for the content taught, such as leadership, communication, but for the stories and tips that Professor Ahmad tells the class. There are also guest speakers such as independent pharmacy owners, Shoppers Associates, Banner start-ups and a chartered accountant that have a wealth of knowledge. The assignment and business plan (worth 30%) are a huge chunk of this course, so start early and ask a ton of questions each class.

**PHM 371: INSTITUTIONAL PHARMACY PRACTICE MANAGEMENT**

Instructor: B. Wilson  
Class Average: A-

This class is taught exactly like Professor Wilson's PHM 214 (Practice Management) course. There are weekly lectures on various topics of hospital pharmacy management, such as organizational structure, financial management, leadership styles along with stories from Professor Wilson's experience being the director of Mount Sinai's pharmacy department. There is only a midterm and final, making the course load lighter than PHM 370, however memorization techniques like using acronyms will be your best friend!

**C) Elective Courses:****PHM 321: SELECTED TOPICS IN THE PHARMACEUTICAL INDUSTRY**

Instructor: A. Chit  
Class Average: B+

This course is a basic overview of the pharmaceutical industry and its processes and does not go into detail on the role of a pharmacist in industry. It is comprised of a midterm, final exam and assignment that are all straightforward. Bonus: the professor brought in a panel of trailblazers in the pharmaceutical industry for the class to learn from and pick their brains. Overall, it is a class with a lighter workload than most in the fall semester and a concise introduction to the world of industry to those interested in that field.

Selected Topics in the Pharmaceutical Industry course is an introduction to the many career opportunities in the field of pharmaceuticals and biopharmaceuticals. It also gives greater insight into the drug development process, from discovery and development to approval to marketing. This course is meant to pique your interest and give you more insight into what is available in this field. Teaching style is mainly didactic lectures but requires participation to get the most out of this course. The lectures are experts in the field and asking questions is a great way to learn more about their respective roles and to network. Grading was broken down into participation (through discussion board activities and in-class interactions), midterm (M/C - but some trivial questions i.e. which city was this company named after?), an assignment (analysis of a new drug from an industry perspective), and a final exam (either 200 trivial M/C or mix of M/C and short answer). To succeed and get the most out of this class, you really need to participate and direct it through thoughtful questions in class. They all say it's hard to get into the field because you need experience. If you are really interested, then network with the prof and lecturers and get your foot in the door early.

**PHM 322: PATIENT/MEDICATION SAFETY\*\***

Instructor: C. Ho  
Class Average: A-

This course will look at patient safety and the potential for medication incidents from two aspects: (1) the medication-use system (e.g., prescribing, order entry, dispensing, administration, and monitoring of drug therapy); and (2) professional practice (e.g., preventable adverse drug events). It will build on topics previously covered in the curriculum, as well as additional materials related to the Institute for Safe Medication Practices Canada, the Canadian Patient Safety Institute, and the concept of continuous quality improvement in pharmacy practice.

**PHM 323: MOLECULAR MECHANISMS IN DRUG ACTION**

Instructors: J. Wells, S. Angers, R. MacGregor, and I. Crandall  
Class Average: Unknown

The course is split into four sections. The first part is taught by Dr. Jim Wells and is somewhat of an introduction to the "molpharm" stuff from first year (Michaelis Menten kinetics, mechanistic models, derivations, graphing, etc.) But don't let that scare you! It's only about 5-7 lectures and pharmacy students that take this course tend to do very well. The second portion is taught by Dr. Ian Crandall and will be very familiar (and straightforward) if you paid attention during your 2nd year microbio classes. The next section is taught by Dr. Stephane Angers, where you get a chance to explore different aspects of cancer (e.g. Sonic Hedgehog pathway, checkpoint inhibition therapies). The last section is covered by Dr. Rob MacGregor, which is centered around nucleic acids. As you may know from pharmaceuticals, Dr. MacGregor's style of lecturing is rather unique, but very enjoyable. There are no assignments for the course, only a midterm and final exam (both short answer and weighted 50-50). It's all about learning concepts and applying them, rather than simply regurgitating them on the exam. The midterm covers Dr. Wells' and Crandall's sections - remember to do plenty of practice exams for Dr. Wells' section, which is similar to PHM140 with tons of bonus marks. The final covers Dr. Angers' and MacGregor's sections.

**PHM 324: RECENT DEVELOPMENTS IN DOSAGE FORM DESIGN\*\* (NEW COURSE)**

Instructors: P. Lee and S. Wu  
Class Average: N/A

This course introduces students to fundamental principles and mathematical tools for the design of modern dosage forms as well as new advances in the field of controlled release drug delivery. Topics to be covered include introduction to controlled drug delivery, mechanisms and kinetics of drug release and their dependence on design parameters, biopharmaceutical aspects of controlled drug delivery, in vitro and in vivo correlations, computer-aided design of controlled release dosage forms, polymers and hydrogels for drug delivery, colloidal drug delivery systems, and measurements of drug release profiles. This course is co-taught to graduate students, senior Pharmaceutical Chemistry students and PharmD students.

**PHM 325: ABORIGINAL ISSUES IN HEALTH AND HEALING**

Instructor: D. Burman  
Class Average: A-

This is a course with a lighter course load than most, however space is extremely limited. There is no midterm or final but there are assignments and reflections to be completed. The course content focuses on health issues of Indigenous Canadians and centers around discussions among classmates and the professor.

**PHM 381: MEDICAL IMAGING FOR PHARMACISTS\*\* (NOT OFFERED LAST YEAR)**

Instructor: R. Reilly  
Class Average: N/A

This course will discuss the principles and applications of medical imaging in patient care. There will be an emphasis on radiopharmaceuticals and nuclear medicine imaging (SPECT and PET) but other imaging technologies will be discussed including MRI, ultrasound, X-ray, mammography and CT. These technologies are applied in diagnosing infectious disease, cancer, cardiovascular disease, hepatobiliary and renal dysfunction, and neurological disorders. The emerging role of molecular imaging using PET and SPECT in selecting patients for personalized medicines for cancer as well as monitoring response to these new therapies will be introduced.

**PHM 383: ANTIMICROBIAL STEWARDSHIP**

Instructor: M. So  
Class Average: B+

A course dedicated for those interested in the policies and procedures in place in institutional settings and beyond in order to optimize the appropriate use of antibiotics. Unlike PCT4: Infectious Diseases in second year, this course is not going to teach you the therapeutics of antibiotics but you will be expected to know everything well beforehand. This course focuses on management, systems and policies used to implement antimicrobial stewardship and has many assignments as well as a midterm and final so be sure to be on top of the workload!

**PHM 384: TEACHING AND LEARNING**

Instructor: A. Lee  
Class Average: B+

The small class size and interactive sessions lends well to help students learn about effective teaching methods and learning theories. If you are that student that loves getting into discussions in class and interacting with teachers and students, you will highly enjoy this course. The course is comprised of class participation, discussion, written reflections, assignments and exams. Not to mention you will have the opportunity to participate in facilitating one of the MTM1 labs and an IPE activity. This is a fun course if you are interested in pursuing teaching in the future and love a good debate.

**PHM 385: DIABETES CARE**

Instructors: H. Halapy and T. Montada- Atin  
Class Average: B

This is an information dense course that is great in allowing students to learn more about diabetes but not much on detailed pharmacotherapy aside from insulin dosing and carb counting. The course consists of a midterm and final that most students found tough due to the amount of content and details that had to be memorized. It will be great to have these slides to refer to in community practice if you want to become a certified diabetes educator in the future.

**PHM 386: MENTAL HEALTH AND ADDICTION**

Instructors: J. Kellar and M. Zhang  
Class Average: A-

This class expands on topics covered in PCT 7, however, therapeutics is not the main focus of this course. Topics include: stigma, harm reduction, medical marijuana, opioid addiction, recreational drug use and more. The latter half of the course focused more on addiction. This class is interactive where the professors switched between traditional lectures to in-class movies, discussions, role play, and an assignment where we assess a virtual patient. The midterm and final are straightforward, and students do well and enjoy the classes, not to mention the movie nights organized by the professors!

**PHM 387: GLOBAL HEALTH**

Instructor: D. Cheng  
Class Average: Unknown

As with most courses, this course follows the rule: what you put into it is what you will get out of it. If you put in a lot of effort, you will gain a lot from this course (and your GPA certainly will not suffer!). The first 5 weeks of didactic lectures are about "big picture" topics and foundations of Global Health that are delivered by various guest speakers to keep things interesting (and they were), and the next 5 weeks on patient cases. While interesting, the amount of work in the course is quite heavy; there are both required and recommended readings that will help with class participation but will take quite a number of hours to read through. The midterm was open book with open ended questions that can be challenging to answer as critical thinking is required. For the weeks with patient cases, the required work before and after class can take some time. The remaining classes are for group presentations about a topic of your choosing - don't be afraid to be creative! There is no final exam; instead there is a final paper that was worth 35%. It is recommended that your presentation be somewhat related to your final paper so that your research can be grouped together (2 birds with 1 stone). While the amount of work can seem daunting, and especially more near the end with the presentation and final paper, this course will not disappoint those who like to discuss and learn more about big picture concepts, and gain more practical knowledge. Plus, the instructor likes to organize a potluck at the end of the course so food is involved!

**PHM 388: MINOR AILMENTS**

Instructor: N. Nakhla  
Class Average: B

One of the most engaging professors and most useful course to take, especially for community pharmacy. You will learn all about self-care/minor ailments such as how to appropriately assess if a patient is a self-care candidate, when to refer, OTC and Rx treatment options and follow up evaluations. There is a project and midterm/final exam that are multiple choice but they can be tricky if you skip class or did not complete the required readings (make sure to take detailed notes, even of videos!) There is a lot of content covered (headaches, fever, infant nutrition, vaginal candidiasis, oral care etc.) but if you show up to class, do the readings and review regularly, it will greatly benefit you in the exam and in your community APPE rotations.

**PHM 391: CURRENT COMPOUNDING TOPICS AND PRACTICE ISSUES\*\* (NOT OFFERED LAST YEAR)**

Instructor: V. Riss  
Class Average: N/A

Pharmacists are expected to understand and comply with Health Canada's directives and policies regarding the distinction between manufacturing and compounding of medications, and with relevant federal and provincial/territorial legislation. Pharmacy graduates should be able to interpret literature, comply with current compounding guidelines and regulations, assess formulation risks, and make appropriate decisions on how to safely compound, label, and choose the correct administration route for compounded products. This course builds upon knowledge and skills gained in PHM 141 Pharmaceutics, PHM 212 Research Methods in Pharmacy and PHM 241 Topics in Pharmaceutical Quality and Clinical Laboratory Medicine, and will explore core principles of sterile and non-sterile compounding in pharmacy. The course will cover a broad range of hazardous and non-hazardous parenteral and oral products with respect to compounding and safety aspects whenever such preparations and products are intended for human use. Students will develop foundational knowledge in compounding methods, safe use of parenteral and oral compounded products, parenteral routes of administration, stability and solubility, and managing product shortages.