



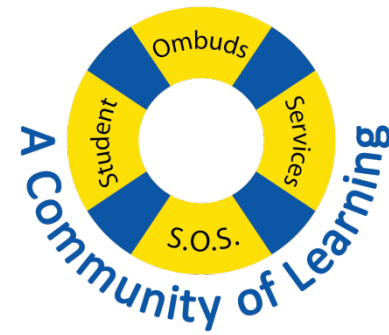
# S.O.S. PRESENTS:

In Collaboration with the Pre-Pharmacy Club at York



## Pharmacy School Seminar

\* Slides will be posted on  
[bethune.yorku.ca/events](http://bethune.yorku.ca/events)



# Who Are We

- Tahmineh Toorani
  - 4<sup>th</sup> Year Honours Biology Student
  - SOS Peer Advisor and Mentor
  - Has written the PCAT
- Ishan Sharma
  - 4th Year Kinesiology Major
  - SOS Planning, Programming and Visioning Coordinator, SOS Representative on BCC, SOS Peer Mentor



# Who Are We

- Dr. Ian Crandall
  - Former U of T Pharmacy Admissions Officer
  - Current U of T Pharmacy Professor
- Heidi
  - U of T PharmD Admissions
- Tiffany Nguyen and Elaine Novik
  - President, Pre-Pharmacy Club at York U
  - Director of Marketing, Pre-Pharmacy Club at York U



# Agenda

- Canadian Pharmacy Schools
- PCAT
- **Focus on requirements for Ontario schools:**
  - University of Waterloo
  - University of Toronto



# Canadian Pharmacy Schools

- **Newfoundland**

- Memorial University of Newfoundland

- **Nova Scotia**

- Dalhousie University

- **Quebec**

- Université de Montréal
- Université Laval



# Canadian Pharmacy Schools

- **Ontario**

- University of Toronto (PCAT)
- University of Waterloo

- **Manitoba**

- University of Manitoba

- **Saskatchewan**

- University of Saskatchewan



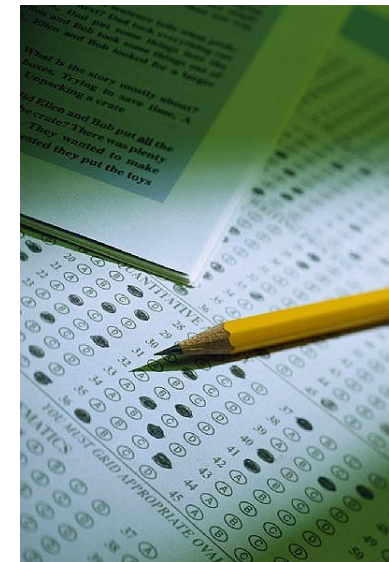
# Canadian Pharmacy Schools

- **Alberta**
  - University of Alberta
- **British Columbia**
  - University of British Columbia (PCAT)



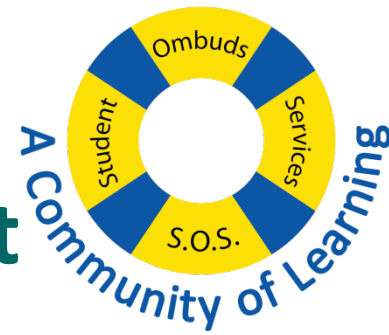
# Pharmacy College Admission Test (PCAT)

- Required for University of Toronto
- 4 hours: 232 MC and  
1 writing topic
- Registration Fee: \$199.00
- Register online at:  
<http://www.pearsonvue.com/pcat/>



For more information visit: [www.pcatweb.info](http://www.pcatweb.info)





# Pharmacy College Admission Test (PCAT)

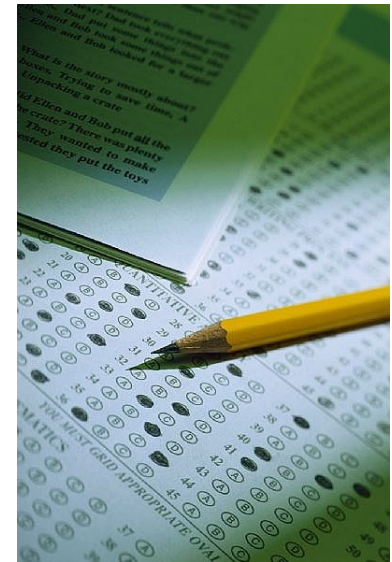
- Held for four testing windows
  - July, September, October/November, and January
  - October 27-31 – November 3-7, 2014
    - Can still register, but late fees apply (\$49.00)
  - January 6-7 2015
    - Registration open
  - First come, first served basis

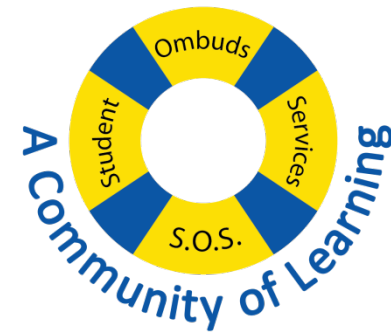
For more information visit: [www.pcatweb.info](http://www.pcatweb.info)



# PCAT – Format

- 6 sections
  1. Writing
  2. Verbal Ability
  3. Biology
  4. Chemistry
  5. Reading Comprehension
  6. Quantitative Ability
- Must achieve certain minimum standard in each section and overall to be considered for admission into University of Toronto





# PCAT – Writing

- **Writing**

- 30 minutes to suggest a solution in essay format to a given problem and problem solving
- Evaluated on convention of language
  - i.e. Discuss a solution to the problem of America's dependence on imported non-renewable fossil fuels such as oil



# PCAT – Verbal Ability

- **Verbal Ability**
  - Analogies
  - Sentence Completion
    - i.e. INEPT : SKILL :: FLIMSY :  
 (“Inept” is to “skill” as “flimsy” is to...)
      - a. Power
      - b. Weight
      - c. Strength
      - d. Thickness



# PCAT – Biology

- **Biology**
  - General Biology
  - Microbiology
  - Human Anatomy and Physiology
    - Which of the following cells does not have a nucleus?
      - a. leukocyte
      - b. epithelial cell
      - c. erythrocyte
      - d. sperm



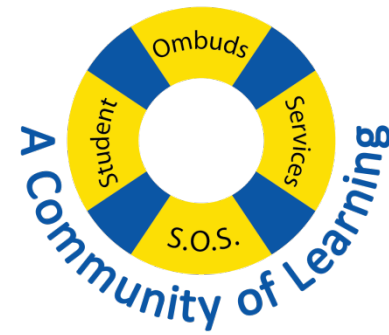
# PCAT – Chemistry

- **Chemistry**
  - General Chemistry
  - Organic Chemistry
  - Basic Biochemistry Processes
    - Hydrocarbons with two or more double bonds are
      - a. saturated
      - b. cyclic
      - c. acids
      - d. unsaturated



# PCAT – Reading Comprehension

- **Reading Comprehension**
  - 50 minutes to read 6 passages
  - Answer 48 multiple choice questions based on the passages:
    - Comprehension
    - Analysis
    - Evaluation



# PCAT – Quantitative Ability

- **Quantitative Ability**
  - Basic Math
  - Algebra
  - Probability & Statistics
  - Pre-calculus
  - Calculus
- **Note: no calculators**





# University of Waterloo





# University of Waterloo

## *Doctorate of Pharmacy (PharmD)*

- Admits **120 students** each September
  - 600 applicants
- **Four year** professional entry-to-practice program:
  - 8 academic terms
  - 3 co-op work terms
- Example class timetable and final exam schedule:
  - <https://uwaterloo.ca/pharmacy/undergraduate-students/timetables>



# University of Waterloo

## Curriculum

<i>Year</i>	<i>Term</i>		<i>Date</i>
Year 1	Winter	Academic (1A)	January–April 2015
	Spring	Academic (1B)	May–August 2015
	Fall	Academic (2A)	September–December 2015
Year 2	Winter	Work Term 1	January–April 2016
	Spring	Academic (2B)	May–August 2016
	Fall	Work Term 2	September–December 2016
Year 3	Winter	Academic (3A)	January–April 2017
	Spring	Work Term 3	May–August 2017
	Fall	Academic (3B)	September–December 2017
Year 4	Winter	Academic (4A)	January–April 2018
	Spring	Academic (4B)	May–August 2018



# University of Waterloo

## Academic Requirements

- **Minimum University Average of 75%** (3.3/4.0 or 7/9.0 GPA)
- **Full course load**--30 credits per year (preferred)
- PCAT not required
- Must pass interview



# Prerequisite Courses (University of Waterloo)

- **Biology**

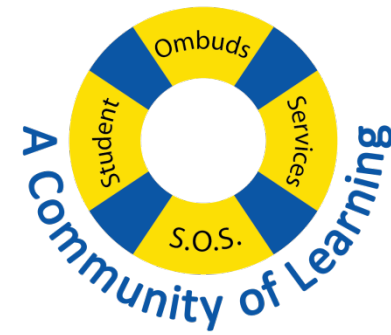
- Introductory (6 credits):
  - SC/BIOL 1000 and SC/BIOL 1001
- Genetics (3 credits): SC/BIOL 2040
- Microbiology (3 credits): SC/BIOL 3150



# Prerequisite Courses (cont.) (University of Waterloo)

- **Chemistry**

- General Chemistry with lab (6 credits):
  - SC/CHEM 1000 and SC/CHEM 1001
- Biochemistry (lab not required):
  - SC/BIOL/BCHM 2020 (3.0) and 2021 (3.0) with SC/BIOL 2070 (3.0)
- Organic Chemistry with lab (6 credits):
  - SC/CHEM 2020 (3.0) and SC/CHEM 2021 (3.0)



# Prerequisite Courses (cont.) (University of Waterloo)

- **English**

- Any 3 credit English Course:
  - To confirm course equivalency, email:  
[pharmacy@uwaterloo.ca](mailto:pharmacy@uwaterloo.ca)



# Prerequisite Courses (cont.) (University of Waterloo)

## ● Math

- Mathematics (6 credits):
  - SC/MATH 1505 (6.0)
  - Or SC/MATH 1013 (3.0) and SC/MATH 1014 (3.0)
- Statistics (3 credits):
  - SC/MATH 1131 3.0 or 1532 3.0 or 2560 3.0
  - Non-math department: SC/BIOL 2060 3.0 or HH/PSYC 2021 3.0 or HH/KINE 2050 3.0





# Prerequisite Courses (cont.) (University of Waterloo)

- **Humanities or Social Sciences**

- 12 credits in any of the following (maximum 6 per subject):

- History
- Religion
- Philosophy
- Classics
- Fine Arts
- Languages
- Literature
- Economics
- Sociology
- Political Science
- Geography



# University of Waterloo

## Application timelines - January 2016

<i>Date</i>	<i>Event</i>
August 11, 2014	<p>Applications are now open – click <b><u>APPLY</u></b> to access the online application.</p> <p>Your application will be acknowledged by E-mail and you will be sent specific information on completing your online Pharmacy Admission Information Form and the Reference Letter Form.</p>
December 24, 2014 – January 2, 2015	<p>Christmas break</p> <p>Although we welcome your application during the Christmas break, acknowledgement E-mails will resume the first week of 2015.</p>
January 5, 2015	<p>Deadline to submit the winter 2016 application and pay the application fee (midnight EST).</p>
January 26, 2015	<p>Deadline to submit Admission Information Form (AIF)</p>



# University of Waterloo

February 9, 2015	Deadline for submitting the following items (details will be provided in the acknowledgement E-mail you will receive after you apply to the program):  <ol style="list-style-type: none"><li>1. Interim University transcript(s)</li><li>2. Reference Letter Form</li><li>3. Confirmation of <u>English Language Requirements</u> (if applicable)</li></ol>
April 9, 2015	Invitations for Pharmacy Admission Interviews will be sent by E-mail.
April 16, 2015	Deadline to confirm attendance for your interview. If you fail to respond by this date, your interview time may be assigned to another applicant.



# University of Waterloo

May 1-3, 2015	Pharmacy Admission Interviews and Fundamental Skills Assessment (for selected candidates)
June 5, 2015	Deadline to submit University transcripts with final Winter 2015 grades.
June 10, 2015	Admission decisions will be communicated to all interviewed applicants
June 24, 2015	Deadline to accept Offer of Admission to Pharmacy
January 2016	Lectures begin



# University of Waterloo

## Non-Academic Requirements

- **Pharmacy Admission Information Form**
  - Essay about you and your involvement in activities
- **References**
  - Preferably from a pharmacist, or a physician or nurse (no relatives)



# University of Waterloo

## Non-Academic Requirements

- **Interview**
  - Conducted by faculty members and pharmacists
- **Fundamental Skills Assessment**
  - Includes a Reading Comprehension, Writing and Basic Mathematic Skills Test (timed)
  - Conducted on the same day as your interview

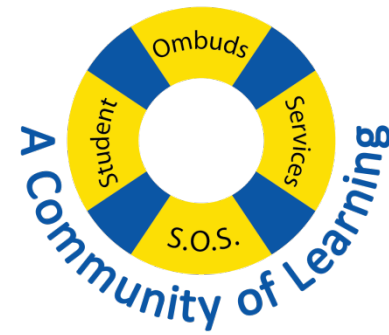


# University of Waterloo

## Co-op Program

- Community: retail pharmacy or family health clinic
- Institutional: hospitals, specialty facilities, or long term care institutions
- Government health agencies
- Pharmacy organizations
- International initiatives





# University of Waterloo

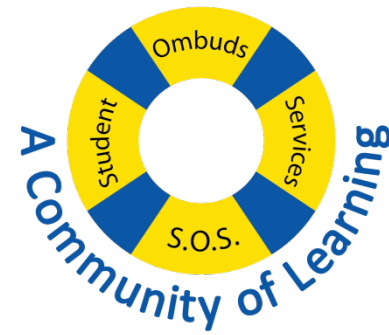
## Tuition

- Fall 2014 program fees:
  - Domestic: **\$9 100** per semester
  - International: **\$19 100** per semester



- Program fees do not include textbooks, University Health Insurance Plan, incidental fees, etc.





# University of Waterloo

## Application Checklist:

- Online application
- Complete all prerequisites
- Submit Pharmacy Admissions Profile
- Submit reference letter form
- Attend interview (if invited)



# University of Waterloo

- **Contact Information**

**Telephone:** (519) 888-4499

**Fax:** (519) 888-7910

**Email:** [pharmacy@uwaterloo.ca](mailto:pharmacy@uwaterloo.ca)

**Website:**

<http://www.pharmacy.uwaterloo.ca/future-students>



# University of Toronto: Leslie Dan Faculty of Pharmacy



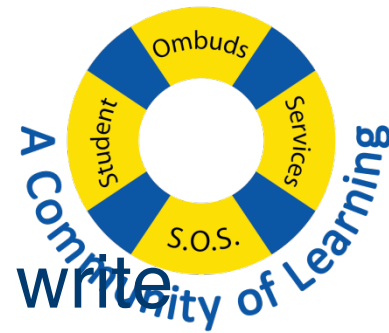
# Leslie Dan Faculty of Pharmacy

University of Toronto



UNIVERSITY OF TORONTO  
LESLIE DAN FACULTY OF PHARMACY

# PharmD Degree

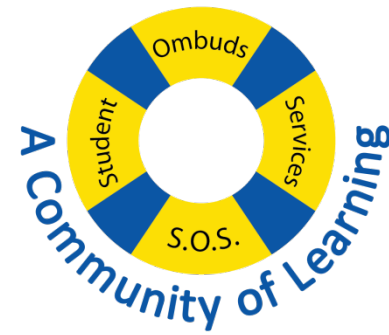


- Upon completion of this degree you can write the licensing exam (PEBC) and become a practicing Pharmacist
- This is a 4 year program with both course work (basic science and clinical) and placements to gain practical experience
- Due to the prerequisite courses required at least two years of University are needed to be eligible
- We admit 240 students per year



# Prerequisite Courses

- High school English and Physics
- BIO120H and BIO130H (biology)
- CHM139H (chemistry)
- CHM138H + CHM247H (organic chemistry)
- CHM220H (physical chemistry)
- BCH242Y or BCH210H (biochemistry)
- MAT135H + MAT136H (calculus)
- STA220H (statistics)
- 2 terms of humanities courses



# Prerequisite Courses

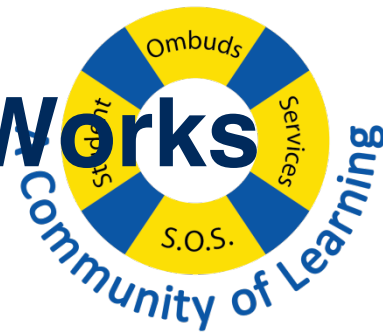


- You need to have a *minimum* of a 70% average
- [www.pharmacy.utoronto.ca/admissions/academic-requirements](http://www.pharmacy.utoronto.ca/admissions/academic-requirements)





# How the Admissions Process Works



- Complete the prerequisite courses and demonstrate good academic performance
- Write the Pharmacy College Admissions Test (PCAT)
- Complete our online application
- Qualified candidates meeting minimum published requirements will be invited to the Faculty for Admission Interviews in March and May
- Offers of admission made in June
- [www.pharmacy.utoronto.ca](http://www.pharmacy.utoronto.ca)





# What Does the Program Teach You?



- Biomedical sciences courses explain:
  - How the human body works and what causes disease states
  - How targeting specific receptors and metabolic pathways can be used to treat specific diseases
  - e.g. Anatomy, Pharmacokinetics, Biochemistry, Pathobiology, Molecular Pharmacology, Microbiology, Toxicology



# What Does the Program Teach You?



- Pharmacotherapy courses explain:
  - How specific diseases are diagnosed and what lab results mean
  - The strategy, choices and considerations involved in treating specific diseases and conditions
  - e.g. Infectious Diseases, Dermatology, Oncology, Neuropsychiatry, Cardiovascular Disease



# What Does the Program Teach You?



- Medication Therapy Management (MTM) courses explain:
  - How to interact with patients
  - How to explain medications and address the patient's concerns
  - Involve role playing to build people skills



# What Does the Program Teach You?



- Experiential placements in hospital and community Pharmacies:
  - Provide “real world” experience in patient management and Pharmacy practice
  - Allow students to experience different work environments
  - Allow working Pharmacists to pass along the “art” involved in a working environment
  - Expose students to healthcare teamwork settings



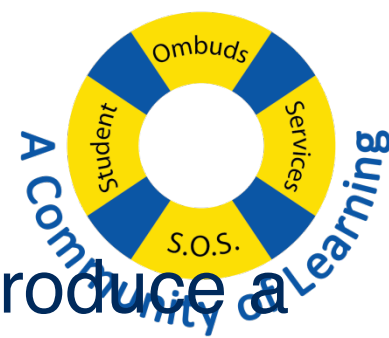
# What Does the Program Teach You?



- Elective and selective courses in 3<sup>rd</sup> year
  - These courses allow students to focus on particular topics or areas
  - As a diverse Faculty with leading practitioners and researchers in a variety of disciplines, we offer students the opportunity to explore the full range of Pharmacy fields, including basic science, drug development, drug delivery, social issues related to drug policies, and Global Health



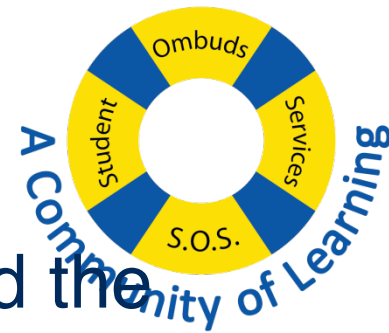
# Future Developments



- In the next few years, the Faculty will introduce a Discovery Stream that will allow students to combine a PharmD with another degree, e.g. MBA, MSc, etc.



# Why Pharmacy @ UofT

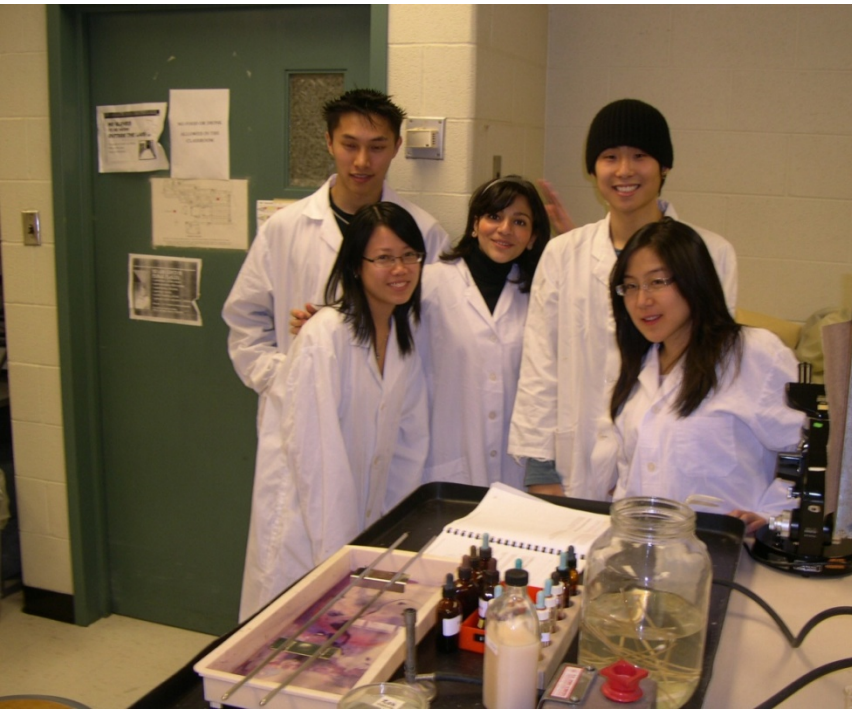


- The Leslie Dan Faculty of Pharmacy and the University of Toronto are world class institutions
- Our PharmD program is at the leading edge of Pharmacy education
- Learn from leading scientists and practitioners
- State-of-the-art teaching and research facility
- Our institutional partners are only steps away
- Toronto – a vibrant and diverse city
- We pride ourselves on being a “family”– we want you to succeed





# Any Questions?





# University of Toronto: Leslie Dan Faculty of Pharmacy



## Contact Information

**Telephone:** (416) 978-3967

**Fax:** (416) 978-8511

**E-mail:** [adm.phm@utoronto.ca](mailto:adm.phm@utoronto.ca)

**Website:** <http://www.utoronto.ca/pharmacy/info.htm>





# Pharmacy School Seminar



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**THANK YOU**



# Q & A



# Session

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# Pre-Pharmacy Club

- YuConnect: Pre-Pharmacy Club @ YorkU
- PrePharm.yorku@gmail.com