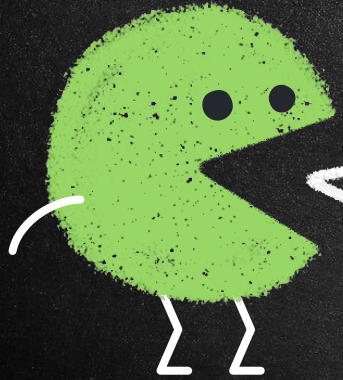
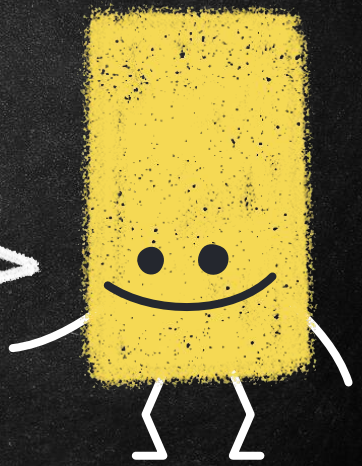
Welcome To Biochemistry Info Night!

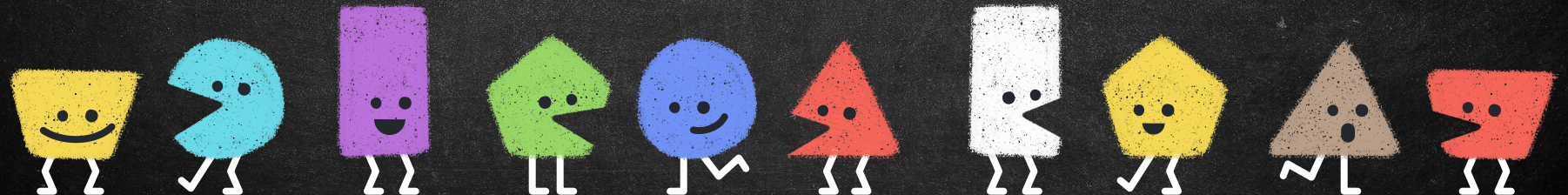




Biochemistry and Biomedical Sciences Society

Jennifer Nousanesengsy
VP Academics
Honours Biochemistry Level IV

Autumn Arnold
VP Academics
Biochemistry Co-op Level III



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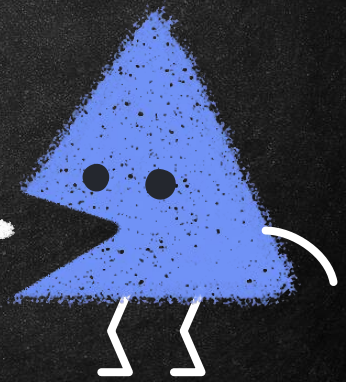
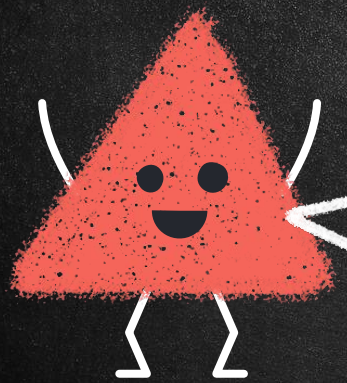


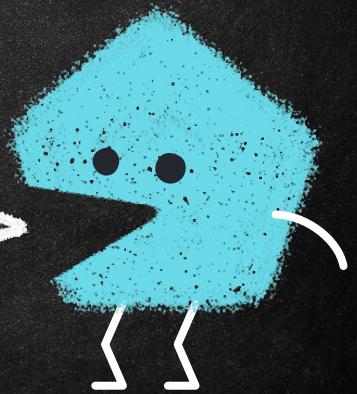
1.

What is Biochemistry?

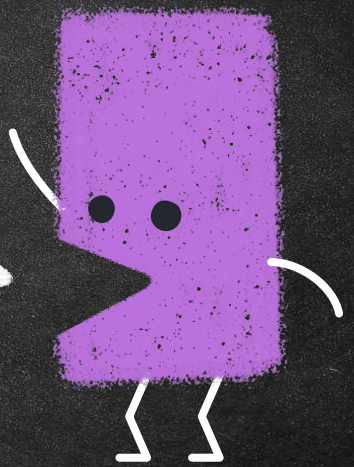
The study of chemical processes within and relating to living organisms

The chemistry OF biology



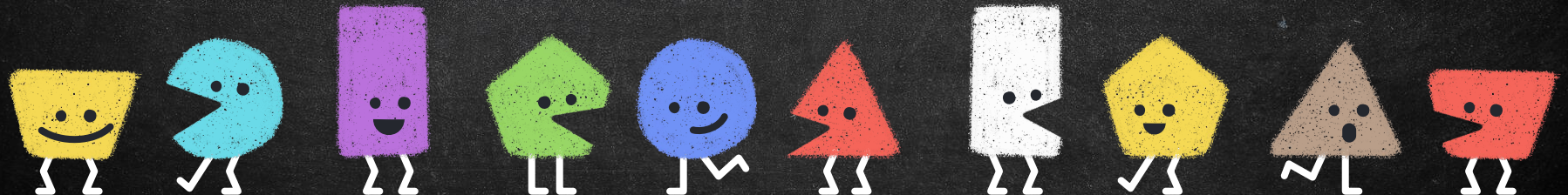


Biochemistry has become the foundation for understanding all biological processes. It has provided explanations for the causes of many diseases in humans, animals and plants.

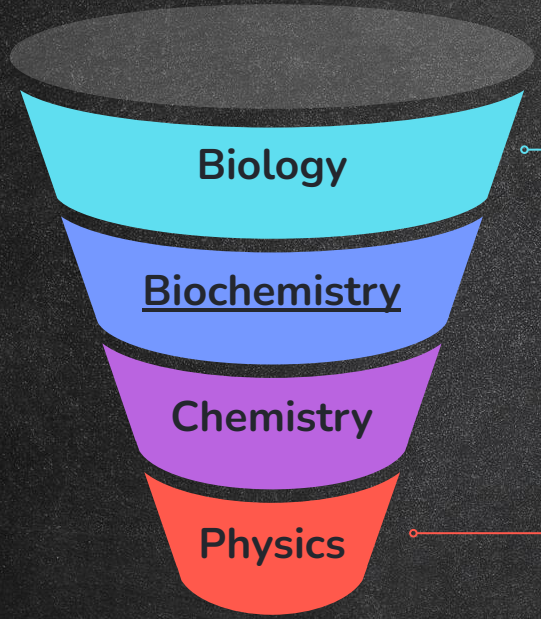


A UNIQUE DISCIPLINE!!

Not just a mix of biology and chemistry courses

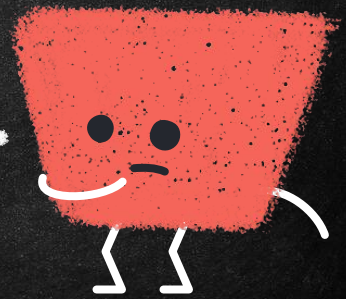


Where Does It Fit In?



Big

Small



Areas of Interest

- Metabolism and regulation
- Cellular reproduction and differentiation
- Chemical basis of inheritance and disease
- Proteins, nucleic acids, lipids, vitamins, hormones
- Bacteria and antibiotic resistance
- Immunological therapies

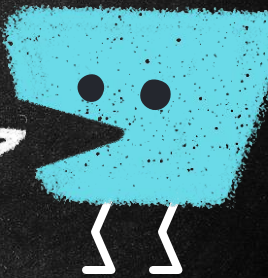
Science and Research Focused

Science

- Metabolism and Regulation
- Genetics
- Organic Chemistry
- Microbial Interactions

Research

- How research is conducted
- Scientific writing
- Careers in Biochemistry
- Laboratory techniques



Courses

Level II

- Nucleic Acids
- Proteins
- Genetics
- Orgo 1
- Orgo 2
- Biochemical Techniques
- 1 Course List
- 2 Electives

Level III

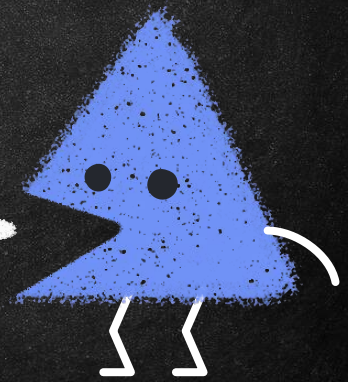
- Metabolism
- Statistics
- 4 Course List
- 4 Electives

Level IV

- Stem Cells
- 2-5 courses (worth) of thesis or specified courses
- 3 Course List
- 1-4 Electives

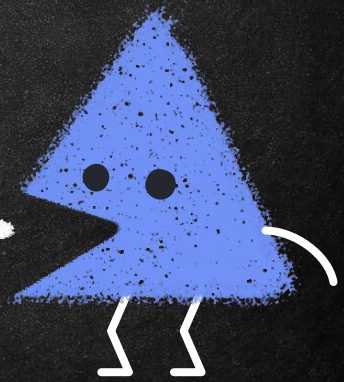
Level II Course List Courses

- ANTHROP 2U03 - Plagues and People
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Biotechnology
- BIOMEDDC 2C03 - Careers
- BIOMEDDC 2W03 - Scientific Writing
- CHEM 2A03 - Quantitative Chemistry
- CHEMBIO 2A03 - Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry



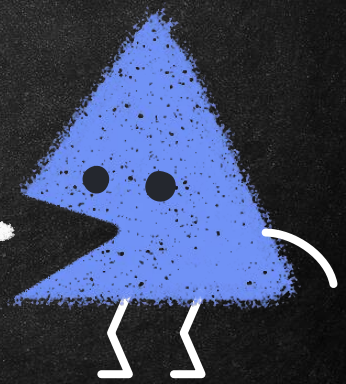
Level III Course List Courses

- ANTHROP 3BD3 - Black Death
- BIOCHEM 3BP3 - Bioinformatics
- BIOCHEM 3CB3 - Advanced Cell Biology
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 3LA3 - Advanced Techniques
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3Z03 - Structural Determination of Macromolecules



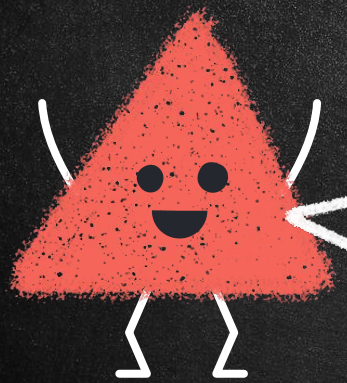
Level IV Course List Courses

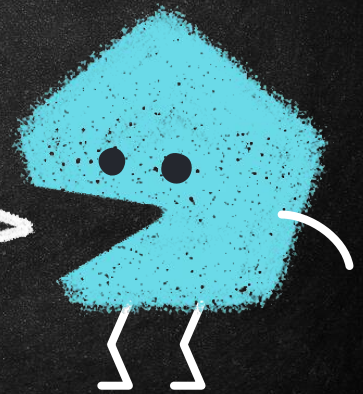
- BIOCHEM 4H03 - Drug Discovery
- BIOCHEM 4J03 - Immunological Principles
- BIOCHEM 4M03 - Advanced Metabolism
- BIOCHEM 4N03 - Membrane Biology
- BIOCHEM 4Q03 - Pharmacology
- BIOCHEM 4S03 - Molecular Biophysics



2.
Why Biochemistry?

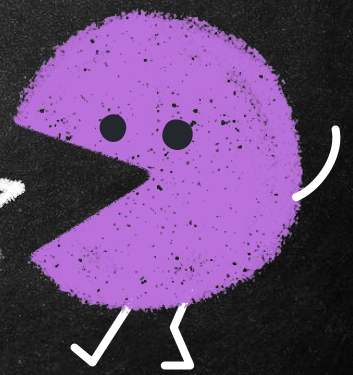
1. Preparation for post-undergrad
2. Research opportunities
3. Engaging community
4. Organization and support





After Undergrad

- Professional school
  - Grad school
  - Medical school
  - Dental school
- Research
- Academia
- Work force



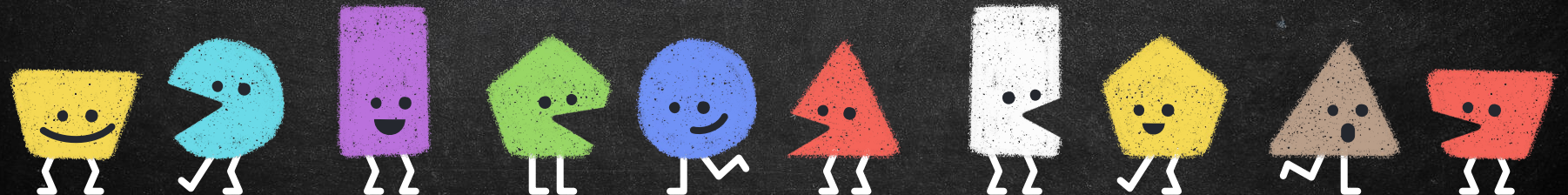
Research Opportunities

- Full-year lab courses
- Project courses
- Thesis courses

Dr. Eric Brown
Antibiotic Resistance
Drug-resistant superbugs

Dr. Jonathan Bramson
Cancer Immunotherapy
Adoptive T-cell therapy

Dr. Alexander Hynes
Bacteriophages
Phages and the gut microbiome



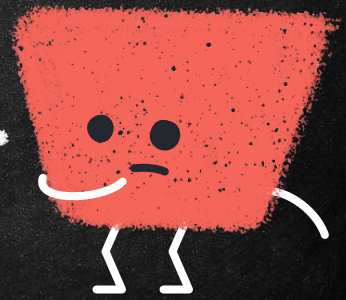
Engaging Community

Social Events

Intramurals

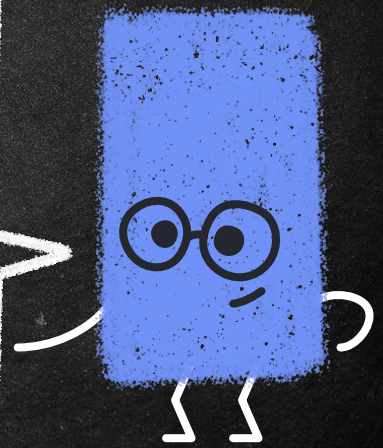
Fundraisers

Lots of opportunities to get involved!



Organization and Support

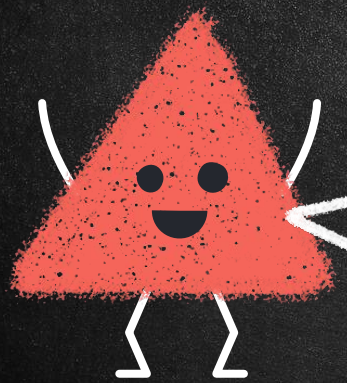
- AMAZING, understanding staff
- Mentorship program
- Academic resources
  - Test reviews
  - Peer editing sessions
  - Research events
  - Information sessions

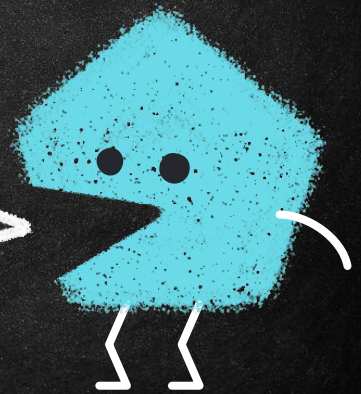


3.

Pathways Within Biochem

- Biochemistry Core
- Biochemistry Research Specialization
- Biochemistry Co-op
- Biochemical Discovery and Commercialization





Level III Specializations

Research Spec.

- Extra research courses in level III
- Mandatory thesis

Co-op

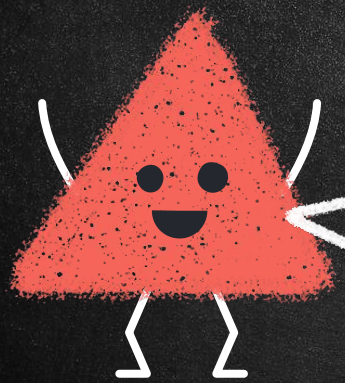
- Degree extended by 1 year
- 2 eight month co-op terms
- Mandatory thesis

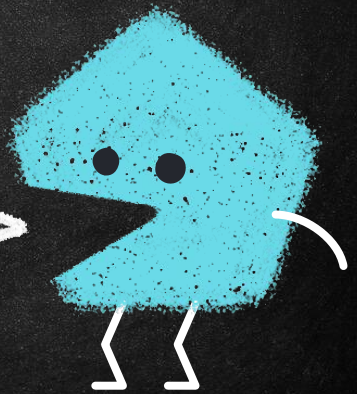
BDC

- Combination of biochemistry and business
- Mandatory thesis

4.
Admission Information

How do I get in?





6 units

- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

6 units

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 units

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 units

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences

6 units

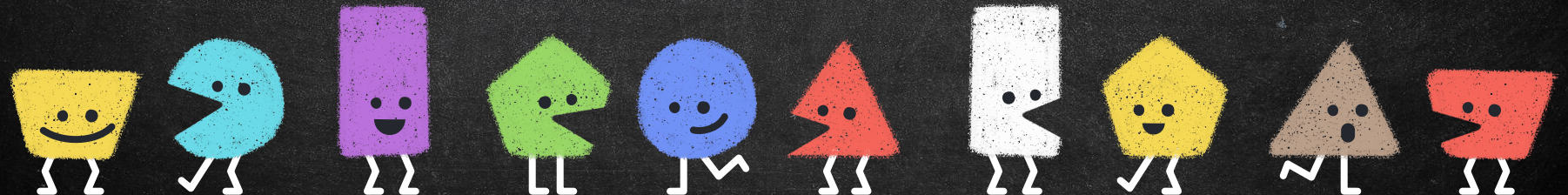
from

- the Science I Course List

A grade of at least C+ in four of BIOLOGY 1A03, 1M03, CHEM 1A03, 1AA3 and either MATH 1A03 or 1LS3 is required.

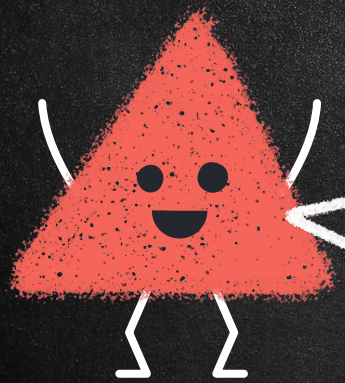
GPA VARIES EVERY YEAR

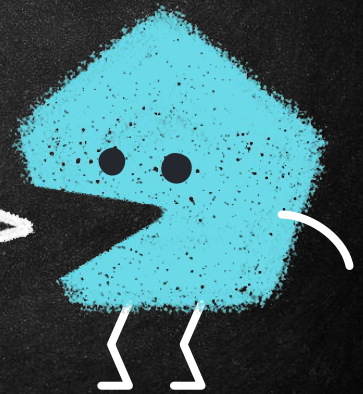
Ranged between 9.0 and 11.0 in the past 3 years



5.

A QUICK NOTE ABOUT TRANSITIONING INTO THE HEALTH SCIENCES FACULTY





Health Sciences Faculty

Staying the same:

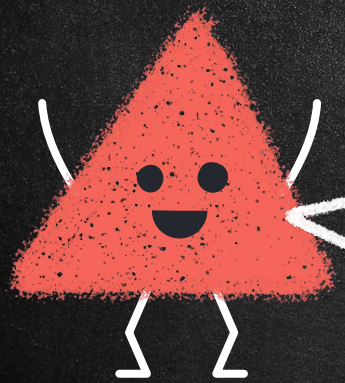
- Admission, curriculum, grad requirements
- Co-op still administered through the SCCE

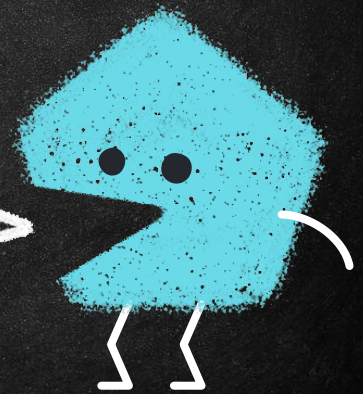
Changing:

- Name of degree (BHSc vs. BSc)
- Tuition and fees
- Awards eligibility
- Access to courses
- Program and course advising resources

6.
Q&A

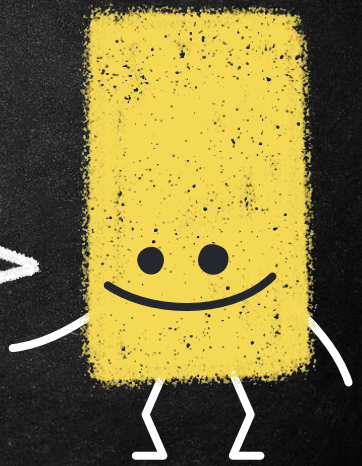
Ask us your questions?





Thank you for listening!

These slides will remain available to you after the presentation



More Resources

Program: https://healthsci.mcmaster.ca/biochem

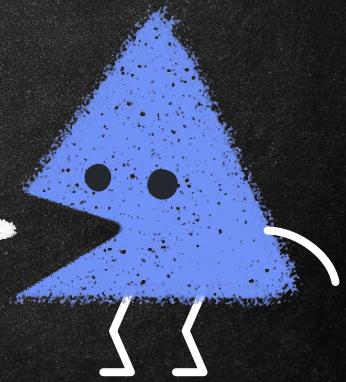
Courses:

https://academiccalendars.romcmaster.ca/preview_entity.php?catoid=44&ent_oid=5976&returnto=9026

Faculty and Research:

https://healthsci.mcmaster.ca/biochem/about-us/people

BBSS: http://www.macbiochemsociety.com/



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