

# Life Sciences/BCHM Information Session



- Dr. Louise Winn, Associate Dean, Life Sciences and Biochemistry  
Professor, Biomedical and Molecular Sciences & Environmental Studies
- DSC LISC Co-Presidents
  - Meaghan Frank and Isaac Emon
- LISC Academic Co-Chairs
  - Lindsay Jefferson and Leila Tibouti
- DSC BCHM Co-Presidents
  - Aidan Booker and Marietta Konermann

**Monday October 25, 2021**

# Office of Life Sciences and Biochemistry

## Location

- Rm. 815 Botterell Hall
  - [Lifesci@queensu.ca](mailto:Lifesci@queensu.ca)
  - [biochem@queensu.ca](mailto:biochem@queensu.ca)
  - Katherine Rudder – LISC
  - Beatriz Sugarman - BCHM
  - Dr. Louise Winn - Assoc. Dean LISC & BCHM
- Use your Queen's email and leave your student #

# Information for 1<sup>st</sup> year Direct Entry students going into 2<sup>nd</sup> year

# Biochemistry

Discipline-focused degree plan offered through the Faculty of Arts and Sciences

Students receive in depth training in a wide range of essential topics related to fundamental cellular processes including:

- Cellular metabolism
- Movement
- Replication
- Repair
- Communication
- Molecular and chemical basis of infection and disease





# Life Sciences

Interdisciplinary degree plan offered through the Faculty of Arts and Sciences

Learn about the following fields in the biomedical sciences:

- Biochemistry
- Cellular and Tissue Physiology
- Anatomy and Reproduction
- Drug Discovery and Human Toxicology
- Microbiology and Immunology
- Cancer Biology and Pathology
- Neurosciences



# WHAT WILL MY CORE DEGREE PLAN BE?

## Biochemistry Major

### 1<sup>st</sup> year

- Chemistry
- Biology
- Physics
- Calculus

### 2<sup>nd</sup> year

- Molecular Biology
- Organic Chemistry
- Inorganic Chemistry
- Statistics

### 3<sup>rd</sup> year

- Physical Biochemistry
- Proteins, Enzymes, Metabolism
- Biochemistry Laboratory

### 4<sup>th</sup> year

- Current Topics in Biochemistry
- Advanced Molecular Biology
- Protein Structure and Function
- Molecular Basis of Cell Function

BCHM 218

CHEM 211, 212, 222, 223

BIOL 243

12 U electives

# WHAT WILL MY CORE DEGREE PLAN BE?

## Biochemistry Specialization

### 1<sup>st</sup> year

- Chemistry
- Biology
- Physics
- Calculus

### 2<sup>nd</sup> year

- Molecular Biology
- Organic Chemistry
- Inorganic Chemistry
- Statistics

### 3<sup>rd</sup> year

- Physical Biochemistry
- Proteins, Enzymes, Metabolism
- Biochemistry Laboratory

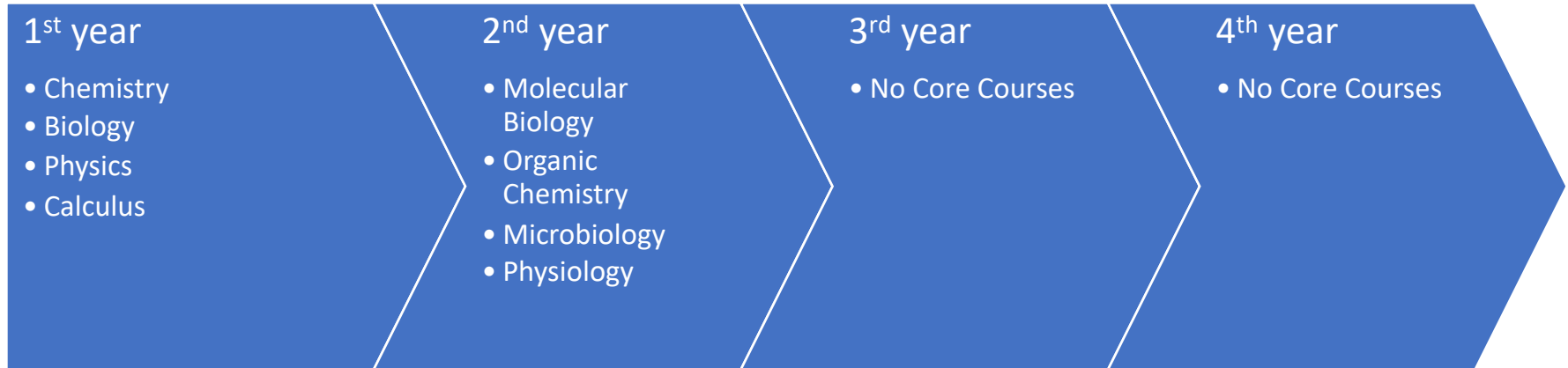
### 4<sup>th</sup> year

- Current Topics in Biochemistry
- Advanced Molecular Biology
- Protein Structure and Function
- Molecular Basis of Cell Function
- **Research project**

BCHM 218  
CHEM 211, 212, 222, 223  
BIOL 243  
12 U electives

# WHAT WILL MY CORE DEGREE PLAN BE?

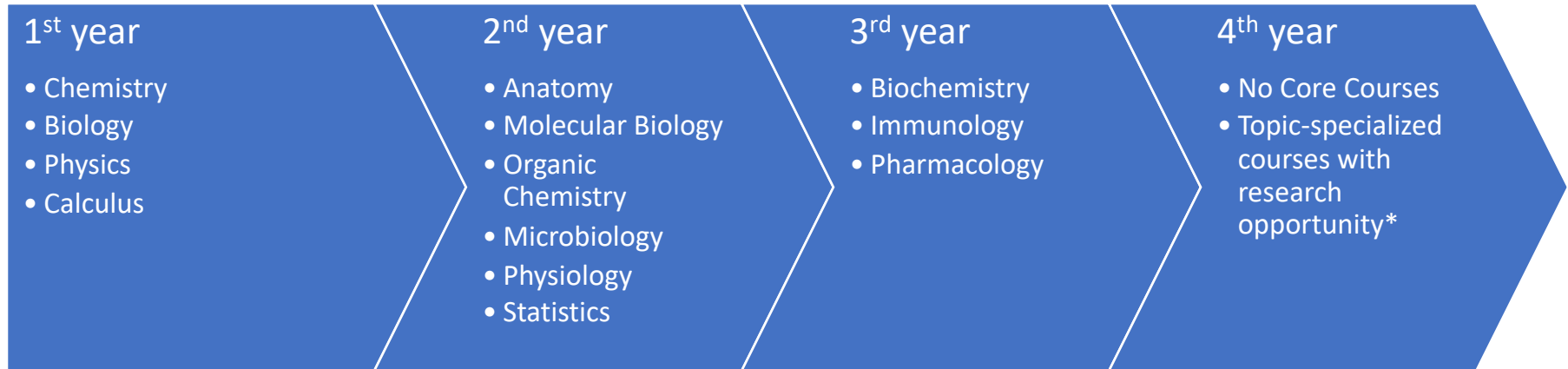
## Life Sciences Major



BCHM 218  
CHEM 281, 281  
MICR 271 or 221  
PHGY 215, 216  
12 U electives

# WHAT WILL MY CORE DEGREE PLAN BE?

## Life Sciences Specialization



ANAT 215, 216  
BCHM 218  
CHEM 281, 281  
MICR 221  
PHGY 215, 216  
STATS

\*Specialization Plans include:  
Cancer Biology, Cardiorespiratory, Drug Development  
and Human Toxicology, Neurosciences,  
Biomedical Discovery/Sciences

## ***SSP:***

Recommended (but not necessary) if your career plans include research (i.e., graduate school) as there is a heavy emphasis on hands-on laboratory/research experience.  
\*\*Also meets the needs of most professional schools.

## ***MAJ:***

Recommended if your career plans are more inclined towards an emphasis on using your biomedical training to pursue a non-research career involving other professional training (medical, dental, business, law or other postgraduate school). The course requirements for the MAJ are designed for the needs of the non-research life sciences or biochemistry student; less core credits and more electives allows for the pursuit of additional electives which can thus be tailored to specific career need. \*\*Also meets the needs of most professional schools.

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# WHAT WILL MY CORE DEGREE PLAN BE?

- **LISC SUB-PLANS:**

- **Biomedical Discovery** – recommended if you want laboratory experience
- **Biomedical Sciences** – provides more flexibility, can take more advanced courses
- **CANC** – those wishing to proceed with research in the field of cancer
- **CRSS** - those wishing to proceed with research in the field of cardiovascular and respiratory sciences
- **DDHT** - those wishing to proceed with research in the field of drug discovery and development as well as toxicology
- **NSCI** - those wishing to proceed with research in the field of neurosciences



# Non-Arts and Sciences courses

- Only 6 units of non-Arts and Sciences courses can be used towards your degree
  - I.e. LAW, Commerce courses
- Exception – can take BMED courses

# Combined BSc/MSc

- Life Sciences and Biochemistry offer a combined program
- “Accelerated” path to graduate school
- Apply in the 2<sup>nd</sup> term of 3<sup>rd</sup> year
- Take up to 6 units of graduate courses during 4<sup>th</sup> year
- Continue 4<sup>th</sup> year research project

# Exit Strategy

If you get an acceptance to medical school in your 3<sup>rd</sup> year...

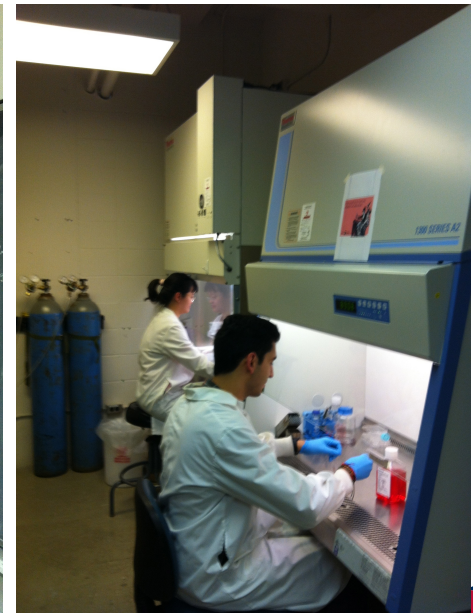
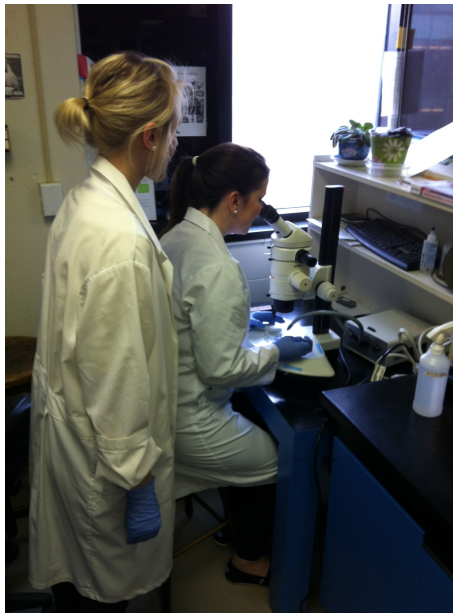
Life Sciences & Biochemistry –  
General Bachelor of Science

Honours routes: Major or  
Specialization

Health Sciences– General Bachelor  
of Health Sciences

Honours route: Major

# Research In Action



## STUDENTS

- ▶ Looking for a Job?
- ▶ Wondering about Career Options?
- ▶ Thinking about Grad School?
- ▶ Want to Build Experience?
- ▶ Tipsheets & Career Resources
- ▼ Services for Students
  - Graduate and Professional Students
  - ▼ Employment Programs
    - M.Eng. Industrial Internship Program
    - **QUIP**
    - SWEP
    - Work Study Program
  - Drop-in Career Advising
  - Events, Fairs, & Information Sessions
  - Career Advising & Resource Area
    - ▶ Workshops
    - ▶ Appointments
  - It All Adds Up
  - LinkedIn at Queen's

## Queen's Undergraduate Internship Program (QUIP)

The Queen's Undergraduate Internship Program (QUIP) provides students with a 12-16 month work experience. QUIP internships are paid, professionally supervised, career-related positions designed to offer second or third year students the opportunity to learn about current advances, practices and technologies in business and industry. The program is open to students in the Faculty of Engineering and Applied Science (domestic and international), Faculty of Arts and Science (domestic and international), School of Computing (domestic and international) and the School of Business (domestic only; not for credit). Due to the longer work term (compared to a 4-month co-op), employers are highly motivated to maximize their time and investment. This means that Internship students are offered the opportunity to manage more extensive and significant projects.

[Search QUIP job postings](#)

[Contact QUIP coordinator](#)



**Got Questions?** Come and see the QUIP Coordinator during QUIP Drop-in Advising Hour – no appointment necessary!

**QUIP Drop-in Advising:** Every Tuesday and Thursday from 11-12 in the [Career Advising and Resources Area](#) (Sept-April)

### — Eligibility

The program is open to students in the Faculty of Engineering and Applied Science (domestic and international), Faculty of Arts and Science (domestic and international), School of Computing (domestic and international) and the School of Business (domestic only - please see an academic advisor in the School of Business before registering).

- Queen's students can participate in QUIP after their 2nd or 3rd year of studies and must be returning to complete their final academic term after the internship.
- Students must have a minimum GPA of 1.9 and the permission of your undergraduate chair to register in QUIP.

# Career Opportunities

**Medicine**

**Biomedical  
Research**

**Law**

**Healthcare Policy and/or  
Administration**

**Industry**

**Pharmacy**

**Veterinary Medicine**

**Education**

**Physiotherapy and  
Occupational Therapy**

**Dentistry**

# DSC Representatives

LISC DSC Instagram Office Hours

LISC DSC Events: Check Social Media (@queensulifesci)

BCHM DSC Events: Check Social Media (@bchmqueensu) and  
a Facebook (Queen's University Biochemistry)