

# Life Sciences and Biochemistry Information Session

- Dr. Louise Winn, Associate Dean, Life Sciences and Biochemistry
- Professor, Biomedical and Molecular Sciences & Environmental Studies
- Wednesday October 16, 2019



## Office of Life Sciences and Biochemistry

#### **Location**

- Rm. 815 Botterell Hall
- Office hours: Mon-Fri 9am-noon & 1-4pm

#### <u>People</u>

- Alana Korczynski BCHM
- Katherine Rudder LISC
- Dr. Louise Winn Assoc. Dean LISC & BCHM
- Dr. John Allingham BCHM Program Coordinator

#### Contact

Life Sciences – <u>lifesci@queensu.ca</u> (Katherine Rudder) Biochemistry – <u>biochem@queensu.ca</u> (Alana Korczynski)

- Use your Queen's email and leave your student #



#### SSP:

Recommended (but not necessary) if your career plans include <u>research</u> (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 <u>non-research</u> 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.



## Information for 2<sup>nd</sup> year students going into 3<sup>rd</sup> year

- i) Biochemistry
- ii) Life Sciences



## Core Courses for BCHM (MAJ)

| 1 <sup>ST</sup> YEAR | 2 <sup>ND</sup> YEAR | 3 <sup>RD</sup> YEAR | 4 <sup>TH</sup> YEAR |
|----------------------|----------------------|----------------------|----------------------|
| BIOL 102/3.0         | BCHM 218/3.0         | BCHM 313/3.0         | BCHM 441/3.0         |
| BIOL 103/3.0         | CHEM 211/3.0         | BCHM 315/3.0         | 6.0 units from:      |
| CHEM 112/6.0         | CHEM 212/3.0         | BCHM 316/3.0         | BCHM 410/3.0 or      |
| PHYS 106/6.0 or      | CHEM 222/3.0         | BCHM 317/6.0         | BCHM 411/3.0 or      |
| PHYS 117/6.0 or      | CHEM 223/3.0         |                      | BCHM 432/3.0         |
| PHYS 104/6.0         | BIOL 243/3.0         |                      |                      |
| MATH 120/6.0 or      |                      |                      |                      |
| MATH 121/6.0 or      |                      |                      |                      |
| MATH 122/6.0         |                      |                      |                      |

## Core Courses for BCHM (SSP)

| 1 <sup>ST</sup> YEAR | 2 <sup>ND</sup> YEAR | 3 <sup>RD</sup> YEAR                 | 4 <sup>TH</sup> YEAR |
|----------------------|----------------------|--------------------------------------|----------------------|
| BIOL 102/3.0         | BCHM 218/3.0         | BCHM 313/3.0                         | BCHM 410/3.0         |
| BIOL 103/3.0         | CHEM 211/3.0         | BCHM 315/3.0                         | BCHM 411/3.0         |
| CHEM 112/6.0         | CHEM 212/3.0         | BCHM 316/3.0                         | BCHM 421/6.0         |
| PHYS 106/6.0 or      | CHEM 222/3.0         | BCHM 317/6.0                         | BCHM 422/6.0         |
| PHYS 117/6.0 or      | CHEM 223/3.0         | Recommended 3.0                      | BCHM 432/3.0         |
| PHYS 104/6.0         | BIOL 243/3.0         | or 6.0 units at the 300 level with a | BCHM 442/3.0         |
| MATH 120/6.0 or      |                      | laboratory                           |                      |
| MATH 121/6.0 or      |                      | of ANAT, BIOL,                       |                      |
| MATH 122/6.0         |                      | BIOM, CHEM, LISC, PHAR or PHGY.      |                      |



## 3rd Year Life Sciences Major

- MAJOR students must obtain a minimum cumulative GPA of 2.5
  - No specific core course requirement
  - Need 3U from LISC List A at the 400 level
  - Need 15U from LISC List A at the 300 level or above
  - Need 6U from LISC List A at the 200 level or above
  - Need 6U from LISC List A



| LISC_List_A           |                   |              |              |              |
|-----------------------|-------------------|--------------|--------------|--------------|
| Options in the Life S | cience Major Plan |              |              |              |
| ANAT                  | BIOL 205/3.0      | CHEM 213/3.0 | PSYC 100/6.0 | STAT 263/3.0 |
| BCHM                  | BIOL 243/3.0      | CHEM 221/3.0 | PSYC 205/3.0 | STAT 361/3.0 |
| CANC                  | BIOL 321/3.0      | CHEM 222/3.0 | PSYC 215/3.0 | STAT 460/3.0 |
| CRSS                  | BIOL 322/3.0      |              | PSYC 235/6.0 |              |
| DDHT                  | BIOL 330/3.0      | CISC 271/3.0 | PSYC 236/3.0 |              |
| EPID                  | BIOL 331/3.0      |              | PSYC 251/3.0 |              |
| LISC                  | BIOL 334/3.0      | HLTH 323/3.0 | PSYC 271/3.0 |              |
| MICR                  | BIOL 339/3.0      |              | PSYC 305/3.0 |              |
| NSCI                  | BIOL 350/3.0      | MATH 221/3.0 | PSYC 323/3.0 |              |
| PATH                  | BIOL 369/3.0      | MATH 225/3.0 | PSYC 333/3.0 |              |
| PHAR                  | BIOL 401/3.0      | MATH 228/3.0 | PSYC 353/3.0 |              |
| PHGY                  | BIOL 403/3.0      | MATH 232/3.0 | PSYC 355/3.0 |              |
| REPD                  | BIOL 404/3.0      | MATH 272/3.0 | PSYC 360/3.0 |              |
|                       | BIOL 430/3.0      |              | PSYC 370/3.0 |              |
|                       | BIOL 441/3.0      |              | PSYC 371/3.0 |              |
| *Excluding:           |                   |              | PSYC 398/3.0 |              |
| ANAT 270/3.0;         | BIOM 300/3.0      | PHYS 206/3.0 | PSYC 420/3.0 |              |
| BCHM 270/3.0;         |                   | PHYS 214/3.0 | PSYC 422/3.0 |              |
| CANC 497/3.0;         | BMED 270/3.0      | PHYS 216/3.0 | PSYC 435/3.0 |              |
| MICR 270/3.0;         | BMED 370/3.0      | PHYS 242/3.0 | PSYC 457/3.0 |              |
| PHAR 270/3.0;         | BMED 380/3.0      | PHYS 274/3.0 | PSYC 470/3.0 |              |
| PHGY 170/3.0          | BMED 381/3.0      |              | PSYC 471/3.0 |              |
|                       | BMED 383/3.0      |              | PSYC 473/3.0 |              |
|                       | BMED 384/3.0      |              | PSYC 475/3.0 |              |
| any course            | BMED 480/3.0      | <b>/</b>     |              |              |
| numbered 499          | BMED 482/3.0      | /            |              |              |
|                       | BMED 483/3.0      |              |              |              |
|                       |                   |              |              |              |
|                       |                   |              |              |              |
|                       |                   |              |              |              |



## 3rd Year LISC Specialization

Specialization students must obtain a minimum cumulative GPA of 2.5

- Core 3<sup>rd</sup> year courses for Specialization:
  - PHAR 340 (3U) (Fall)
  - 3 Units from MICR at 300 level; MICR400-453; MICR 461
  - Depending on subplan BCHM 315 (3U) and BCHM 316 (3U) or BCHM 310 (9U)





#### 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





- Only 6 units of non-Arts and Sciences courses can be used towards your degree
  - le LAW, Commerce courses, GLPH

 Exception - can use up to 9 units if they are all approved (are part of your course lists)



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|-----------------------|-------------------|--------------|--------------|--------------|
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| BCHM                  | BIOL 243/3.0      | CHEM 221/3.0 | PSYC 205/3.0 | STAT 361/3.0 |
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| MICR                  | BIOL 339/3.0      |              | PSYC 305/3.0 |              |
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| REPD                  | BIOL 404/3.0      | MATH 272/3.0 | PSYC 360/3.0 |              |
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|                       | BMED 383/3.0      |              | PSYC 473/3.0 |              |
|                       | BMED 384/3.0      |              | PSYC 475/3.0 |              |
| any course            | BMED 480/3.0      | <b>/</b>     |              |              |
| numbered 499          | BMED 482/3.0      | /            |              |              |
|                       | BMED 483/3.0      |              |              |              |
|                       |                   |              |              |              |
|                       |                   |              |              |              |
|                       |                   |              |              |              |





- 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

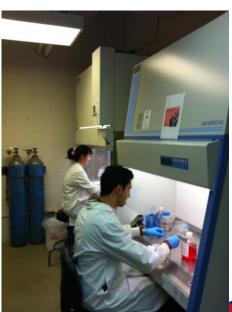
# Research In Action











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#### 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.



Contact OUIP 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.





#### **LSO Networking Night**

## Please join the LSO members, Board and other Industry individuals for the November Networking Night

LSO's Networking Nights event series provides a forum for LSO members and non-members to build connections with the life sciences community in a social setting.

On average we have 100 -120 confirmed attendees per event, with our most popular event drawing 140 people. One third of attendees represented SME companies, 33% were researchers/students, with the remainder being consultants, lawyers, investors, accelerators, multinationals, and government delegates.

If you are looking to raise your profile within the Life Sciences community, Sponsorship Opportunities are available. For more information, please contact the LSO Office (admin@lifesciencesontario.ca)

Tuesday November 12, 2019





# Canadians Studying Medicine Abroad Wednesday October 30, 2019 B143 6 - 7:30PM



# Career Opportunities



# Medicine

Biomedical Research

Law

Healthcare Policy and/or Administration

Industry

Pharmacy

**Veterinary Medicine** 

Education

Physiotherapy and Occupational Therapy

Dentistry

## Contact Us



By email:

Life Sciences – <u>lifesci@queensu.ca</u> (Katherine Rudder)

Biochemistry – <u>biochem@queensu.ca</u> (Alana Korczynski)



## DSC Representatives

Biochemistry

Life Sciences – Mentorship Program

Mentor - <a href="https://forms.gle/spK1fiNsEWE1Bw2q6">https://forms.gle/spK1fiNsEWE1Bw2q6</a>

Mentee - <a href="https://forms.gle/Hs5mokNDNuV2f69z8">https://forms.gle/Hs5mokNDNuV2f69z8</a>