Department of Physics Orientation
For new (incoming) students

Part One: Overview of the Department (Dr. Laszlo Kalman)
Break: Group Discussion and Website Suggestions (in breakout rooms)
Part Two: Student Advising (Matthew Storms)
Part Three: CUBCAPS Presentation (Arielle Dascal, Christian Palmer)
Overview of the Department

Outline

• Diversity and Inclusion, Academic Integrity
• Spaces in the Department
• Program Overview
• Summer Programs/Extracurricular Activities
• Resources for Students
Department of Physics Spaces

Loyola Campus, Science Pavilion (SP) West Broadway side
Department of Physics Spaces

SP Building 2\textsuperscript{nd} Floor (West Broadway side)

- Physics Teaching Labs
Department of Physics Spaces

SP Building 2\textsuperscript{nd} Floor (West Broadway side)

- Physics Teaching Labs
Department of Physics Spaces

SP Building 3rd Floor

- Department of Physics Kitchen
- Undergraduate Physics Study Room
- Offices for most Physics Faculty and TAs
Department of Physics Spaces

Research Labs *(see also Department of Physics → Research)*

SP Building Basement, 3rd & 5th floor, PERFORM Centre
B.Sc. Degree Programs

- Minor in Biophysics
- Major Physics
- Specialization in Physics
- Specialization in Biophysics
- Honours – Physics/Biophysics, GPA > 3.3
- Co-op program (combine with any of the above)
B.Sc. Degree Programs

Physics & Biophysics

Experiment

Theory

Computation

Experiment

Theory

Computation

Master theoretical (bio)physics

Year 1: **Physics: An Introduction**
Mechanics, Mathematical Theory, Electricity

Year 2: **Principles of Natural Science**
Quantum Theory, Thermodynamics, Magnetism

Year 3: **Modern Directions in Physics**
Transistors, MRIs, Lasers, Photosynthesis

Year 1: **Principles of Experimental Physics**
Error Analysis, Scientific Reporting

Year 2: **Experimental Design**
Automated Data Collection, Modelling Results

Year 3: **Real Research**
For-credit Research in a Lab in the Department!

Plan, execute, and analyze robust experiments

Develop computational skills

Year 1: **Numerical Analysis**
Solve Equations/Problems with a Computer

Year 2: **Interfacing Experiments**
Remotely Control Instrumentation

Year 3: **Computational Physics**
Neural Networks, Data Analysis, Monte Carlo
Co-Op Program
Combining study with work experience

- Three paid work terms as part of your degree
- Training in CV writing and job application
- Must be a full time student (>12 credits/term)
- GPA > 2.8
- Contact Dr. Laszlo Kalman for details
- Visit Institute for Co-operative Education

Co-op Internships:
- PERFORM Research Center Agilent Technologies (twice)
- McGill Space Institute
- Presto Heinrich-Heine-Universität
- European Space Agency
Get in touch with fellow students:

- Homeroom
- Student Success Centre
- Student groups
- Student Hub
- CUBCAPS
1st Year: Get involved

Popular Extra-Curricular Activities

• Build a network of peers by attending our course tutorials
• Space Concordia (Rockets, Microgravity Physics/Biophysics)
• CUBCAPS (Student Association—Activities and Network)
• FutureReady Career Development Seminars

Plan your Summer (The best time to get experience!)

• Katalís (STEM Outreach)
• Work part-time: internships / research / volunteer

http://www.concordia.ca/artsci/physics/current-students/summer-programs-extracurricular-activities.html
Resources for Students

**Administrative:**
- Birks Student Centre
- International Student Office
- Student Accounts
- Office of Rights and Responsibilities

**Library and Bookstore:**
- Concordia Library
- Concordia Book Stop (Bookstore)

**Physical and mental health:**
- Health Services
- Access Centre for Students with Disabilities
- Counselling and Psychological Services

**Student association:**
- CUBCAPS

**Services:**
- Campus Security and Emergency Services
- Career Planning Services
- CU Off-Campus Housing
- Dean of Students Office
- French courses
- LIVE Centre (volunteering)
- Multi-faith and Spirituality Centre
- Navigator Program/Welcome Crew
Diversity and Inclusion

• The Department of Physics at Concordia University is a rapidly diversifying environment.

• We embrace this diversity by a firm commitment to inclusiveness.

• Everyone who dedicates their time and passion to physics belongs here and deserves to feel equally valued and respected no matter their
  • gender
  • sexual orientation
  • ethnicity
  • religion
  • age or
  • disability
Diversity and Inclusion

Groups and Resources

- Concordia Student Union / CUBCAPS
- Counselling & Psychological Services
- Women in Physics Canada
- Queer Concordia
- Aboriginal Student Resource Centre
- Multi-Faith and Spirituality Centre
- Access Centre for Students with Disabilities
Academic Integrity

Concordia University places the principle of academic integrity, that is, honesty, responsibility and fairness in all aspects of academic life, as one of its highest values.

Academic Code of Conduct

The most common offense under the Academic Code of Conduct is plagiarism.

Please,

- if you complete a homework with someone else, write it down;
- if you use references, mention it in your work;
- be honest on exams,
- respect the intellectual property (IP) of faculty and fellow students.
Academic Regulations

Where do I find information about all of the University’s administrative procedures?

• Consult the Undergraduate Calendar

• Be aware of important Undergraduate Academic Dates

• Talk to your Academic Advisor

Matthew Storms (Office: SP-367.01)  
BSc Program Coordinator & Student Advisor  
matthew.storms@concordia.ca
People to Know in the Department

❖ Matthew Storms (BSc Coordinator and Advisor)
  o Office: SP-367.01 (matthew.storms@concordia.ca)

❖ Marie-Anne Cheong Youne (Assistant to the Chair - Graduate Program Assistant)
  o Office: SP-365.02 (marieanne.cheongyoun@concordia.ca)

❖ Patrick Doane (Teaching Labs Coordinator)
  o Office: SP 265.01 (patrick.doane@concordia.ca)

❖ Dr. Alexandre Champagne (Department Chair)
  o Office: SP-367.03 (A.Champagne@concordia.ca)

❖ Dr. Laszlo Kalman (Undergraduate and Co-op Program Director)
  o Office: SP-365.10 (laszlo.kalman@concordia.ca)

❖ Dr. Pablo Bianucci (Undergraduate Teaching Labs Director)
  o Office: SP-367.21 (pablo.bianucci@concordia.ca)
Studying and Homework Skills
Group Exercise (15 min)

(Have fun, this is to get to know each other)

- Enter your breakout room;
- Discuss the Group Activity and answer the questions;
- Return to main room
- If accidentally left the meeting join again with the link
Academic Advising

Outline

• Follow your course sequence!
  • Design of the programs
  • What’s in a BSc degree
  • Plan ahead, avoid pitfalls
• Reach out early and often!
• Tools for success
Course Sequences – Winter Entry
Major Physics

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<thead>
<tr>
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<th>WINTER</th>
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<tr>
<td>MAST 218</td>
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## Course Sequences
### Major Physics
#### Design of the Programs

**BSc Major**

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Major Physics

BSc Major

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- Don’t forget to take *electives.*
**Course Sequences**

**Major Physics**

Plan ahead and avoid pitfalls

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<tr>
<td><strong>WINTER</strong></td>
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<tr>
<td>PHYS 252 Optics</td>
<td>PHYS 253 Electricity and Magnetism I</td>
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<td>PHYS 335</td>
<td>PHYS 334 Thermodynamics</td>
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- Start thinking about next year **now**.
Course Sequences
Specialization: Physics

BSc Specialization, Option A: Physics

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- Don’t forget to take **electives**.
- Start thinking about next year **now**.
Course Sequences
Specialization: Physics

One example of what can go wrong.

- 1\textsuperscript{st} Winter: I forgot PHYS 367
- 2\textsuperscript{nd} Fall: I can’t take PHYS 377
  \textit{PHYS 367 is a prerequisite}
- 3\textsuperscript{rd} Fall: I don’t take PHYS 459
  \textit{I want to finish 377 coreq. first}
- 4\textsuperscript{th} Winter: I can’t take PHYS 468
  \textit{I have to take it in the 5\textsuperscript{th} Winter}

\textit{My graduation is delayed 1 year}
Specialization: Biophysics

BSc Specialization, Option B: Biophysics

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- Don’t forget to take **electives**.
- Start thinking about next year **now**.
Freshman year (U0, no CEGEP)

- Strongly suggest to follow suggested sequence
- Example: first Semester
  - **Must take:** PHYS 204 (Mechanics), MATH 203 (Cal I)
  - Otherwise: unable to take 12 required credits!
- Get in touch for full details!
Contact me (Matthew Storms) ext: 5167
Advising: MTWR 10AM-11AM, 3PM-4PM
Zoom ID: 911 741 4138; Password: Montreal

For help

- Course sequence?
- Transfer credits?
- Struggling?
- Personal difficulties?

For a leg up

- Graduate earlier.
- Research opportunities.
- Career questions.
When to reach out?

- Become Familiar with the **Academic Calendar**

Important Dates:

- **January 26: Add/Drop deadline**
  If you want to take a class, you must enroll before this date! Exceptions do occur, but there is *no guarantee*. If you drop a class after this date, it will appear as a DISC on your transcript and you will not be refunded. Exceptions are *extremely rare* and require extensive documentation.

- **March 29: DISC deadline**
  If you are enrolled in a class beyond this date, you **unable to drop** the class for a DISC. Exceptions do occur, but there is *no guarantee*. 
When to reach out?

What does it mean?

▪ **If you are on the waitlist for a class, you should follow the materials until Jan 26.** If you are enrolled from the waitlist but have not been following the lectures, you will have a hard time catching up.

▪ **If you are uncertain whether you should take a class, you should reach out for advising before Jan 26**

  You will not be able to take the class otherwise.
Tools for success

- Attend the department-offered tutorials
  - Register for the tutorials.
    - You do not have to attend every session.
  - Tutorials are supplementary to the course:
    - An opportunity to ask questions.
    - A chance to interact with your classmates.

- You best resource is your peers
  - Get in touch with each other
    - Moodle—use the online forum to discuss
    - Teams—free office 365 for all students!
    - CUBCAPS reps—Christian and Arielle
Thanks for your Time
Hope to see you soon!
WHO ARE WE?

WE ARE AN UNDERGRADUATE STUDENT RUN ORGANIZATION WHICH CREATES AND RUNS ACADEMIC AND SOCIAL EVENTS THROUGHOUT THE ACADEMIC SCHOOL YEAR.

VP Internal Physics and VP Academic Physics
AKA You’re Representatives in CUBCAPS!
WHAT EVENTS TO WE RUN?

ASFA has made an oath that since the school semester will be taking place online, all events under the ASFA umbrella must be online as well, so we’ve had to adapt as an MA.

Concordia Undergraduate Biochemistry, Chemistry and Physics Society
SAMPLE LIST OF EVENTS FOR FALL 2020

Our first major event we are hosting this term is:
CUBCAPSATHON
September 18-20

OTHER EVENTS THIS TERM INCLUDE:

~ PERSONAL FINANCE WORKSHOP WITH DESJARDINS
~ TRIVIA NIGHTS
~ HALLOWEEN COSTUME CONTEST
PHYSICS DEPARTMENT MENTORSHIP PROGRAM

MENTEE
~ IN YOUR FIRST YEAR OF THE PHYSICS PROGRAM (U0 OR U1)
~ ARE INTERESTED IN HAVING SOMEONE HELP YOU THROUGH THE YEAR
~ WANT HELP MAKING CONNECTIONS WITH PEOPLE IN THE DEPARTMENT

MENTOR
~ IN YOUR FINAL YEARS OF THE PHYSICS PROGRAM (U3 AND ABOVE)
~ ARE INTERESTED IN SHARING THE KNOWLEDGE YOU’VE GAINED THROUGHOUT THE PAST FEW YEARS
HOW TO STAY UP TO DATE WITH CUBCAPS

CUBCAPS FACEBOOK PAGE: https://www.facebook.com/cubcaps

CUBCAPS INSTAGRAM PAGE: https://www.instagram.com/cubcaps/

EVEN IF YOU DON’T CARE ABOUT CUBCAPS, WE HIGHLY RECOMMEND YOU JOIN THE CONCORDIA PHYSICS UNDERGRAD FACEBOOK PAGE, IT WILL BE AN EXCELLENT RESOURCE THROUGHOUT YOUR TIME IN THE PROGRAM

CONCORDIA PHYSICS UNDERGRADS FACEBOOK GROUP: https://www.facebook.com/groups/484038771756605
CONTACT INFORMATION

ARIELLE DASCAL (VP ACADEMIC PHYSICS):
PHYSACADEMIC.CUBCAPS@ASFA.CA

CHRISTIAN PALMER (VP INTERNAL PHYSICS):
PHYSINTERNAL.CUBCAPS@ASFA.CA

ZOE TSAVOUSSIS (MENTORSHIP PROGRAM COORDINATOR):
ZOE.B.TSAVOUSSIS@GMAIL.COM