Department of Physics Orientation
For new (incoming) students

• **Part One:** Overview of the Department (Dr. Laszlo Kalman)

• **Part Two:** Academic Advising (Nata Zazubovits)

• **Part Three:** CUBCAPS Presentation (Rami Zemouri, Sarabjot Grewal)
Outline

- Delivery format
- People to Know in the Department
- Some useful spaces in the Department
- Program Overview
- Summer Programs/Extracurricular Activities
- Resources for Students
- Policies and Regulations
This **Fall 2022** term will be a full return to in-person learning at Concordia University. We offer few online courses.

### Fall 2022 PHYS courses

<table>
<thead>
<tr>
<th>In-person</th>
<th>Online (eConcordia)</th>
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<td>206</td>
<td>284 EC</td>
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<td>224</td>
<td>(Astronomy for non-physic students)</td>
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<td>225</td>
<td>(CEGEP)</td>
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<td>226</td>
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</table>

& Weekly research colloquia
Physics Student Spaces

Where PHYS students can study or attend online classes

- Undergraduate Physics Study Room (SP 365.14)
- Data Analysis Study Room (SP 265.03)
- Lunch room / kitchen (SP 365.11)
People to know in the Dept.

- **Nata Zazubovits (BSc Coordinator and Academic Advisor)**
  - Office: SP-367.01 ([physics-advising@concordia.ca](mailto:physics-advising@concordia.ca))
  - Zoom and in-person (on campus): Monday-Thursday
    See [ADVISING HOURS](#)

- **Marie-Anne Cheong Youne (Assistant to the Chair & GPA)**
  - Office: SP-365.02 ([marie-anne.cheongyoune@concordia.ca](mailto:marie-anne.cheongyoune@concordia.ca))
  - On leave

- **Jasmyn Jin (Interim Assistant to the Chair)**
  - Office: SP-365.02 ([marie-anne.cheongyoune@concordia.ca](mailto:marie-anne.cheongyoune@concordia.ca))
  - In-person (on campus): Tuesday, Wednesday, Thursday
People to know in the Dept.

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

- Dr. Christophe Grova (Undergraduate Lab Director)
  - Office: SP-265.02 (christophe.grova@concordia.ca)

- Dr. Pablo Bianucci (Graduate Program Director)
  - Office: SP-367.21 (pablo.bianucci@concordia.ca)
People to know in the Dept.

❖ Patrick Doane (Teaching Labs Coordinator)
   o Office: SP 265.01 (patrick.doane@concordia.ca)
   o In-person (on campus): Tuesday-Friday

❖ Casey Rae Nunn (Departmental Administrator)
   o Office: SP-365.16 (physics.da@concordia.ca)
   o Available online mostly, not usually a student contact point
   o However, until Advisor position is filled you might receive information from her

❖ Dr. Valter Zazubovits (Department Chair)
   o Office: SP-367.03 (valter.zazubovits@concordia.ca)
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

- New! Data Analysis Study Room (SP 265.03)
Department of Physics Spaces

SP Building 3rd Floor

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

Research Labs (see also Department of Physics → Research)

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

Physics & Biophysics

- Theory
- Experiment
- Computation

Plan, execute, and analyze robust experiments

Develop computational skills

Master theoretical physics and biophysics

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!
B.Sc. Degree Programs
(90 credits total)

- Extended Credit Program (+30 basic science credits if coming from another province or from abroad)

- Major Physics (45 credits + electives and /or minor)

- Specialization in Physics/Biophysics (66 credits including 1 research project (497) + electives/minor)

- Honours – Physics/Biophysics, GPA > 3.3 (72 credits including up-to 3 research projects: 289, 389, 496) + electives

- Co-op program (combine with any of the above)

- Minor in Biophysics (24 credits; for those majoring in something else)
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
- Requires detailed planning with academic adviser to avoid delayed graduation

Co-op Internships:
- PERFORM Research Center, Agilent Technologies (twice)
- McGill Space Institute
- Presto Heinrich-Heine-Universität
- European Space Agency
Getting in touch with fellow students
(both healthy and a professional skill to develop)

- Attend the (free) tutorials for your PHYS courses (see class schedule)
- BSc study room, etc.
- 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)
• Future Bound Career Development Seminars

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

• Work part-time: internships / research / volunteer
  http://www.concordia.ca/artsci/physics/current-students/summer-programs-extracurricular-activities.html
• Katalís (STEM Outreach)
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
- Recreation and Athletics

**Student association:**
- CUBCAPS

**Other Services:**
- Campus Security
- 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
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.

- 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

NB! Nata Zazubovits  (Office: SP-367.01)
BSc Program Coordinator & Student Advisor

physics-advising@concordia.ca

NB! Or to Dr. Laszlo Kalman  (Office: SP 367-01)
Undergraduate Program Director
Diversity and Inclusion: Building the Next Generation Department of Physics

Our statement:

“Our 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 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
### Major Physics (45 credits of PHYS and MAST)

### Year 1: 21 Program Credits

<table>
<thead>
<tr>
<th>FALL</th>
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Honours students can replace a general elective in Year 1 with PHYS 289 Honours Research Experience I.
# Course Sequences

## Major Physics

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Don’t forget **electives**.

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**Course Sequences**  
**Major Physics**

**YEAR 1: 21 PROGRAM CREDITS**

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Don’t forget *electives*

*Honours students can replace a general elective in Year 1 with PHYS 289 Honours Research Experience I.*
# Course Sequences
## Major Physics

### YEAR 2: 15 PROGRAM CREDITS

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<th>FALL</th>
<th>WINTER</th>
<th>Prerequisites:</th>
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<tbody>
<tr>
<td>PHYS 253</td>
<td>PHYS 252</td>
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<tr>
<td>Electricity and Magnetism I</td>
<td>Optics</td>
<td></td>
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<td>MAST 219</td>
<td>PHYS 335</td>
<td>PHYS 232</td>
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<tr>
<td>Thermodynamics</td>
<td>Methods of Theoretical Physics II</td>
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<tr>
<td>PHYS 377</td>
<td>Elective (3 credits)</td>
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<tr>
<td>Quantum Mechanics I</td>
<td>Suggested: PHYS 260 Introductory Biophysics</td>
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<td>PHYS 367</td>
<td>Elective (3 credits)</td>
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<tr>
<td>Suggested: PHYS 355 Electronics</td>
<td>Suggested: PHYS 330 Experimental Physics II</td>
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*Honours students can replace a general elective in Year 2 with PHYS 389 Honours Research Experience II.*

Don’t forget **electives**

Plan ahead
## Course Sequences

### Spec. Physics

### YEAR 1: 24 PROGRAM CREDITS

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Honours students can replace a general elective in Year 1 with PHYS 289 Honours Research Experience I.
Course Sequences Spec. Physics

One example of what can go wrong.

**First Winter:** I do not take PHYS 367 (sounds hard)
**Second Winter:** PHYS 367 was fun and totally manageable (oops)

**Third Fall:** I take PHYS 377 but not PHYS 459 (bad time to start following the sequence blindly)

**Third Winter:** I can no longer take PHYS 468
**Fourth Fall:** I finally take PHYS 459
**Fourth Winter:** I finish with PHYS 468

Graduation Delayed One Year : ( ): ( )
Specialization: Biophysics

YEAR 1: 24 PROGRAM CREDITS

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<tr>
<td>BIOL 266</td>
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<td>Cell Biology</td>
<td>Multivariable Calculus II</td>
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Honours students can replace a general elective in Year 1 with PHYS 289 Honours Research Experience I.
Freshman year / Extended credit program / year 0 - no CEGEP

- **Strongly suggest to follow the sequence exactly**
- 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!

![Diagram showing prerequisites and course structure]
Contact:

Nata Zazubovits ext: 5167
Laszlo Kalman ext: 5051

Advising:

Th 2PM-3PM,
Zoom ID: 884 5964 1892
Password: Montreal

- Course sequence?
- Transfer credits?
- Struggling?
- Personal difficulties?
- Graduate earlier.
- Research opportunities.
- Career questions.
When to reach out?

- Become Familiar with the Academic Calendar

Important Dates:

- **Sept 19: 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.

- **December 8: 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?

Become Familiar with the Academic Calendar

What does it mean?

- If you are on the waitlist for a class, you should follow the materials until Sept 19. 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 Sept 19. 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.

- **Your peers are an important resource**
  Get in touch with each other
  Moodle—use the online forum to discuss
  Teams—free office 365 for all students!
  CUBCAPS reps — Rami Zemouri, Sarabjot Grewal
Wishing you a great Fall semester!