Concordia University
Arts and Science
Department of Physics

Department of Physics
TA Orientation

Part One: **Practical Information for TAs**

Part two: **Small group discussion**

Part Three: **Pedagogical Expectations**

~~Part Four:~~ **~~Presentation from your Union (TRAC)~~**

Practical Information for TAs

Outline

- What is a TA workload / Who can have one?

- TA Contract / Workload Sheet.

- Available Resources

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UPC

Patrick Doane, Msc
Teaching Labs Coordinator
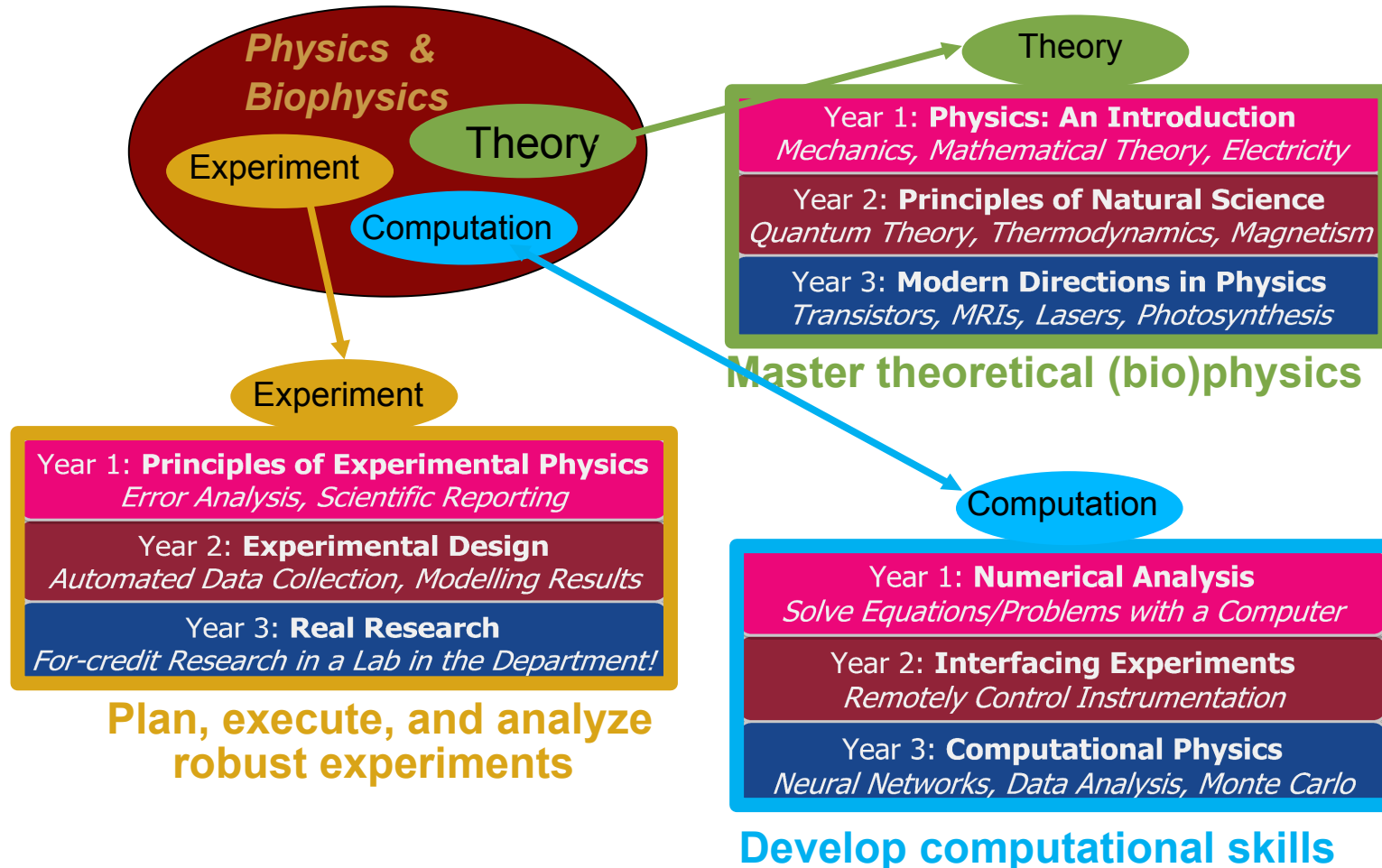
Dr. Laszlo Kalman
UPD

Dr. Valter Zazubovits
Chair

Dr. Pablo Bianucci
GPD

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BSc program design

Physics & Biophysics

- Experiment
- Theory
- Computation

Theory

| 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* |

Master theoretical (bio)physics

Experiment

| 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

Computation

| 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* |

Develop computational skills

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What is a TA workload?

- About* 10 hours per week
    - Fall & Winter: **130 hours** over about* 13 weeks
    - Summer: **65 hours**, usually over half of the semester (6.5 weeks)

* Exact duties / weeks to be confirmed with course supervisor and indicated on Workload sheet

Do I Have to TA?

- Talk your supervisor: If their funds allow it, they can cover your TA salary so that you have more time for research (often in summer)

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Am I sure to get one?

Guaranteed for full time grad students with no external funding:

- Masters: first 7 semesters

- PhD: first 4 years

- Possible that TA is available after time limits

- Department needs are lower in Summer

  - Sometimes you may be given 1.5 TA during Fall or Winter instead of a TA position in the summer.

Types of TAs in the Department of Physics

- Freshman/CEGEP Course Tutorials (PHYS 204, 205, 206)

- Freshman/CEGEP in-person Course Grader (PHYS 204, 205, 206)

- Freshman/CEGEP Lab TA (PHYS 224, 225, 226)

- BSc-level Physics Lab TAs (PHYS 230, 330)

- BSc-level Physics course TAs (small class: tutorials + grading)

- eConcordia Intro Physics TAs (PHYS 200, 204-EC, 205-EC, 273, 284)

Zeljko Bulut (left)
Wentworth Brookes (right)
Lab Technicians

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TA Workload Sheet (FRIS)

- Make sure to check the tasks involved

- See if the time for each task makes sense

- If you need explanations or have worries, talk with the course instructor first (to possibly modify the sheet)

- Reach out to the UPC if you need more technical help

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Signing Procedure

- Refer to [instructions](#) for all the details

- You must sign the TRAC union agreement once every year before getting access to signing workload sheets or contracts

- You will not be able to sign your workload sheet until the course supervisor has completed and submitted it. Ideally, you should meet with the course supervisor to agree on the task breakdown **prior to** signing the workload sheet.

- Once your workload sheet is signed by the chair (anticipate a delay of 1-2 days), a contract will be created.

- Sign both the workload sheet and contract as soon as possible

  Delay in signing => delay in payment!

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TA Resources

Any problem with your TA work?

If, for any reason you cannot work (health, accident, professional or emergency travel, personal issues) you need to contact promptly, **by email**, the instructor (copy the UPC in the email).

- Too many hours given the contract
- Expectations not well defined
- Problem with students

Act as quickly as possible
(the work of a TA is important throughout the whole term)

- First, speak with the course's instructor
- Still no resolution? see the Undergrad Program Director
  (Prof. Laszlo Kalman - laszlo.kalman@concordia.ca)

Check in with your union, TRAC
http://trac-union.ca

Know the rights and responsibilities of the Concordia community
http://www.concordia.ca/content/dam/common/docs/policies/official-policies/BD-3.pdf

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TA Resources

CTL (Centre for Teaching and Learning) - BEST Resource!!
https://www.concordia.ca/ctl/digital-teaching/create-deliver-content.html

Resource for help with designing a course / use of technologies
Help with creating videos, ZOOM sessions, etc.

GradProSkills (Professional development resources for grads)
https://www.concordia.ca/students/gradproskills.html

Feeling overwhelmed? A student looks like they need personal help?

Health (and mental health) support:
https://www.concordia.ca/health.html

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Small group discussion

Objectives:

(1) Meet a few of your peers and
(2) Chat with them about your preparation to TA

Some discussion points:

- What are the resources available to improve as a TA?
- What are your rights and responsibilities towards students and faculty?
- How to manage your TA time and be efficient in this role?

Dr. Laszlo Kalman
Undergraduate Program Director

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Pedagogical Expectations

Outline

- Types of TAs in Physics

- A few pedagogical/logistics ideas for each type of TA

- What to do, where to reach to, when students need accommodation

Natalja Zazubovits, Msc
Undergraduate Program Coordinator

Freshman / CEGEP Course Marker (in-person PHYS 204, 205, 206)

- Introductory Physics:

    PHYS 204: Mechanics
    PHYS 205: Electricity and Magnetism
    PHYS 206: Waves and Modern Physics

- Hours are not evenly distributed

    e.g. Some weeks have no workload, some weeks will have double.
    Need to be available during exam period to help grade midterm and final exams.

Freshman Course Tutorials (PHYS 204, 205, 206)

- One responsibility: 5 times a week, a 45 minute lecture.

    Keep pace with course outline
    Prepare relevant worked problems in advance
    Present engaging tutorial and answer live student questions

- No marking, no office hours.

- Supervised by Undergraduate Program Coordinator

    Need to meet by the first week of the semester
    Check in every two weeks (pace/attendance/recurring questions)

Freshman/CEGEP Laboratory TA (PHYS 224, 225, 226)

- Introductory Physics Labs:

  PHYS 224: Mechanics
  PHYS 225: Electricity and Magnetism
  PHYS 226: Waves and Modern Physics

- Coordinated by Patrick Doane

  Need to get in touch within first week to work out schedule

- Demonstrating experiments (may include remote experiments)

- Grading lab reports

- Answering student questions regarding experiments and reports

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BSc-level Physics Laboratory TA (PHYS 230, PHYS 330)

- In person

- Coordinated by Patrick Doane

    Need to get in touch within first week

- Demonstrating experiments

- Grading lab reports

- Answering student questions regarding experiments and reports

- Always looking for strong experimentalists for these positions

BSc-level Physics course TA (mostly 200 and 300 –level courses)

- Two responsibilities (~65 hours each)

  1. Prepare and lead one 1h15min tutorial per week*

  2. Grading assignments and/or midterms and or final exams (depending on the instructor)

- Always looking for willing students with a strong relevant background

  We are always looking at the possibility of offering more tutorials
  This is very beneficial for the department as a whole
  Please consider ranking this option highly on your preferences form
  Feel free to indicate if you only feel comfortable TAing select courses

Except in rare cases specified during assignment

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eConcordia intro physics TA (PHYS 200, 273, 284, and PHYS 204-EC, 205-EC, 206-EC)

- Assist with and improve the provision of online courses

    Answer students' questions regarding course content*
    Make yourself available to students during a regular time frame
    Generate engagement in the online forums
    Grading of exams

*You are not responsible for questions about course dates/deadlines, midterms, etc. If students approach you with technical difficulties, simply refer them to helpdesk@econcordia.com

Department Expectations

Please meet with the course teacher/supervisor!
in the first week of the semester or earlier

What does it means?

Establish clear timelines, duties and expectations
Establish whether hours are flexible or rigid
Ask for help *right away* if you face any issue
Solicit feedback regularly

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Good Pedagogical Practice

- Try to answer students within 1 work day if possible (if part of your duties). E.g. could set aside 30 min each day to do this.
  - Especially important when teaching online.
  - Check forums often
- When your supervisor asks for something, at a minimum reply to acknowledge the message.
- Keep in mind that, in general, we try to be accommodating to students, if their demands are reasonable.
- Give feedback to students when marking (if time permits).
- Be as clear as possible when answering a question on a forum.
  Don't assume students have the same information or knowledge as you
- When answering a question, *tell students what they are doing well*
  (before showing them what they are doing wrong …)

Good Pedagogical Practice

- Ask for advice!
    - From your supervisor (teacher of the course)
    - From the other TAs with the same responsibilities,
    - From TAs having done the same job in past semesters,
    - From your students.
    - From either Patrick Doane (teaching laboratories) or Lazlo Kalman (for all non laboratory courses)

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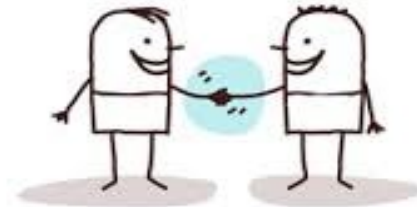
Review CTL Resources:
(highly recommended!)

- ## CTL Website

Graduate Seminar in University Teaching
An Insider's Guide to Being a Teaching Assistant
Top 10 strategies for TAing a virtual course
Summary of TA resources

- ## CTL Webinars

  - Live Q&As

  - Using Udemy

  - Improve accessibility

  - Managing Students

  - Providing Feedback

Become familiar with tools for online interaction with students (this is a sample)**.**

- CTL guides
  - Get familiar with Moodle/Zoom/YuJa
  - Make use of additional features Quizzes/forums/polls/chat/etc.
  - Synchonous & async. components Use both!
  - Be engaging!

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Thank you for teaching in our Department!

Our students – each time we tap their talent, we grow!

~~Next: A Word from TRAC~~

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