

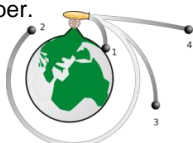
PHY131H1F

Introduction to Physics I

Class 1



- Welcome - please make yourself comfortable!
- We are **Jason Harlow** and **Andrew Meyertholen**. We will be sharing the teaching between now and December.
- Today will be an introduction and team lecture
- On Wednesday Dr. Harlow will take over for the first half of the semester, starting with Chapter 1!



Today's Outline

1. **Introduction** Who are we? What is physics?
2. **Run of the Course** Online Assignments, Practicals, Tests and Exam
3. **Physics Education Research** Why all the clickers, pre-class quizzes, practicals?
4. **Why are We in This Class?**
5. **Tips for Class Success**

Who is teaching this course?



- **Jason Harlow**, Senior Lecturer
- B.Sc. in Physics at U of Toronto 1993
- Ph.D. in Astronomy and Astrophysics at Penn State 2000
- I have been teaching at U of T for 8 years



- **Andrew Meyertholen**, Lecturer
- B.Sc. and M.Sc. In Physics at U of Illinois 1997 and 1999
- Ph.D. in Physics at UC San Diego 2009
- This is my first year teaching at U of T

Our contact information



- **Jason Harlow**, teaching first half of course
- jharlow@physics.utoronto.ca
- 416-946-4071
- Office: MP121B
- Office hours: W3-4 and F9-10, starting Friday



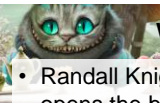
- **Andrew Meyertholen**, teaching 2nd half
- ameyerth@physics.utoronto.ca
- 416-978-7783
- Office: MP129A
- Office hours: R 2-3 and F11am-12

Other important contacts



- **Dr. Pierre Savaria**, Course Coordinator
- phy131@physics.utoronto.ca
- 416-978-4135
- Office: MP129E

- **Ms. April Seeley**, Course Administrator
- seeley@physics.utoronto.ca
- 416-946-0531
- Office: MP129
- Office hours: Monday, Tuesday, Thursday, Friday 9:30am to 5:00pm, and Wednesdays from 9:30am to 4:30pm



What is Physics?

- Randall Knight, the author of the course textbook, opens the book with the following quote:

Said Alice to the Cheshire cat,

“Cheshire-Puss, would you tell me, please, which way I ought to go from here?”

“That depends a good deal on where you want to go,” said the Cat.

“I don’t much care where—” said Alice.

“Then it doesn’t matter which way you go,” said the Cat.

- Lewis Carroll, *Alice in Wonderland*

- The point is, physicists try to understand nature by observing nature and looking for patterns and principles which explain things.

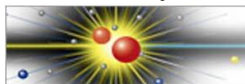
What is Physics?

- In physics our observations to guide us about what questions to ask, and our questions determine what direction the research takes.
- Have you ever wondered
 - Why is the sky blue?
 - Why is glass an insulator but metal a conductor?
 - What, really, is an atom?
- The main purpose of this course is to teach you the **methods** by which physicists have come to understand the laws of nature.
- By the time you finish this course, you will be able to recognize the evidence upon which our present knowledge of the universe is based.

Physics at U of T

- Some of the top research fields in our department are:
- Atmospheric – Observational and Computational
- Biological Physics
- Condensed Matter Physics – Theoretical and Experimental
- High Energy Particle Physics – Theoretical and Experimental
- Geophysics
- Quantum Optics
- Physics Education Research

Physics at U of T



University of Toronto
Particle Physics



Physics at U of T

- Angry Birds at Summer Science Camp, led by Professor Sabine Stanley (Earth, Atmospheric and Planetary Physics)



About Learning Physics

- In PHY131, tests and the exam will involve understanding concepts and solving problems. There will be math.
- Each concept builds on previous ones. This will continue into the second half of the full course: PHY132
- Assimilating any concept takes time.
- Keep up with your studies. Come to class.
- The “last minute cram” before a test or exam is not likely to help you.

What can you expect of us?

- To try to teach well and explain physics clearly, at an appropriate level
- To treat you with courtesy, respect and kindness
- To be fair
- To be in our office at scheduled office hours
- To answer emails within 48 hours
- To begin class at 11:10am and end class at or slightly before noon

What do I expect of you?

- To read the assigned chapter **before** coming to class (or at least watch the pre-class video)
- To keep up with the online homework
- To be seated and ready for class at 11:10
- To not have more than one clicker with you
- To not make lots of noise during class or do stuff which distracts your neighbours
- To be patient with us when we make mistakes, and also to point out any mistakes we don't notice right away

Online Homework

- You should purchase a **MasteringPhysics**® Student Access Kit, either as part of the textbook package or as a stand-alone
- Register with your name (same name on your student card) and UTorID
- Enrol in this course: **MPPHY131F12**
- **Pre-class Quizzes** (worth 3% of course mark) are quite short – should take no more than 10 minutes, and are due by 8am on most Mondays and Wednesdays
- **Problem Sets** (worth 9% of course mark) are quite long – make take between 1 and 3 hours – these are due most Fridays at 11:59pm – the first one is due Sep. 19

Tests and Exam

- **Test 1** is **Tuesday October 2, 6:00-7:30PM** in room(s) to be announced
- An alternate sitting will be scheduled just before the main sitting of the test for students who demonstrate a conflict with another academic activity at U of T – you must visit April in MP129
- **Test 1** is worth 15% of the course mark, and covers Chapters 1-3, the first 4 sections of Chapter 4, and the Error Analysis Document
- **Test 2**, also worth 15%, is Tue. Nov. 20, 6:00PM
- The **Final Exam** is worth 40% of the course mark, covers the entire course, and will be held some time TBA between Dec.10-21

Practicals

- Note that Practical begins this week, starting today. This week is a short Practical.
- All Practicals are either in MP125A or MP125B, which are right beside each other – lists will be posted so you know which room to go to
- You will be assigned to sit with 3 other people from this course, and the 4 of you will form a team for the next five practical sessions.
- You will be working on Practicals activities together and sharing a mark on the notebooks.
- Teams are scrambled half-way through the course.

How to get more information

- The main way of keeping up with what's going on in the course is the web-site at:
<https://portal.utoronto.ca>
- The Course Information page on the portal page for this course has all the rules for the course – PLEASE READ IT!
- Also, we will email you from time to time at your utoronto.ca email address
- The above forms of electronic communication are mandatory – please use them!
- I have also set-up an optional hashtag on twitter: #phy131 - I will check this sometimes during class 