

## How Does That Work?

**UofT JupyterHub**

# What is UofT JupyterHub?



- Access at <https://jupyter.utoronto.ca/>
- cloud solution to run Jupyter Notebooks (.ipynb files), as well as R and Julia files
- Linked to your UofT account, all lecture notes are stored as a copy in JupyterHub!
- Advantages
  - Don't need to install anything, just need internet
  - Save on local memory by storing work in the cloud
  - UofT JupyterHub compute is equipped for most programming and data science tasks in your courses

# Overview – Course Lecture Notes

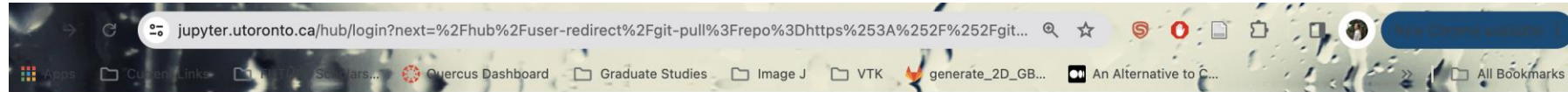
[View All Pages](#)

## Lecture 1.2 JupyterHub Links (Kinsella & Goodfellow)

[Jupyter Notebook \(JupyterHub\)](#)

Jupyter Notebook Completed (JupyterHub)

# Overview – Course Lecture Notes



The 2i2c JupyterHub for [University of Toronto](#)



UNIVERSITY OF  
**TORONTO**  
JUPYTERHUB

Operated by: **2i2c** | Funded by: **University of Toronto** | Designed by: **2i2c**

[Log in to continue](#)

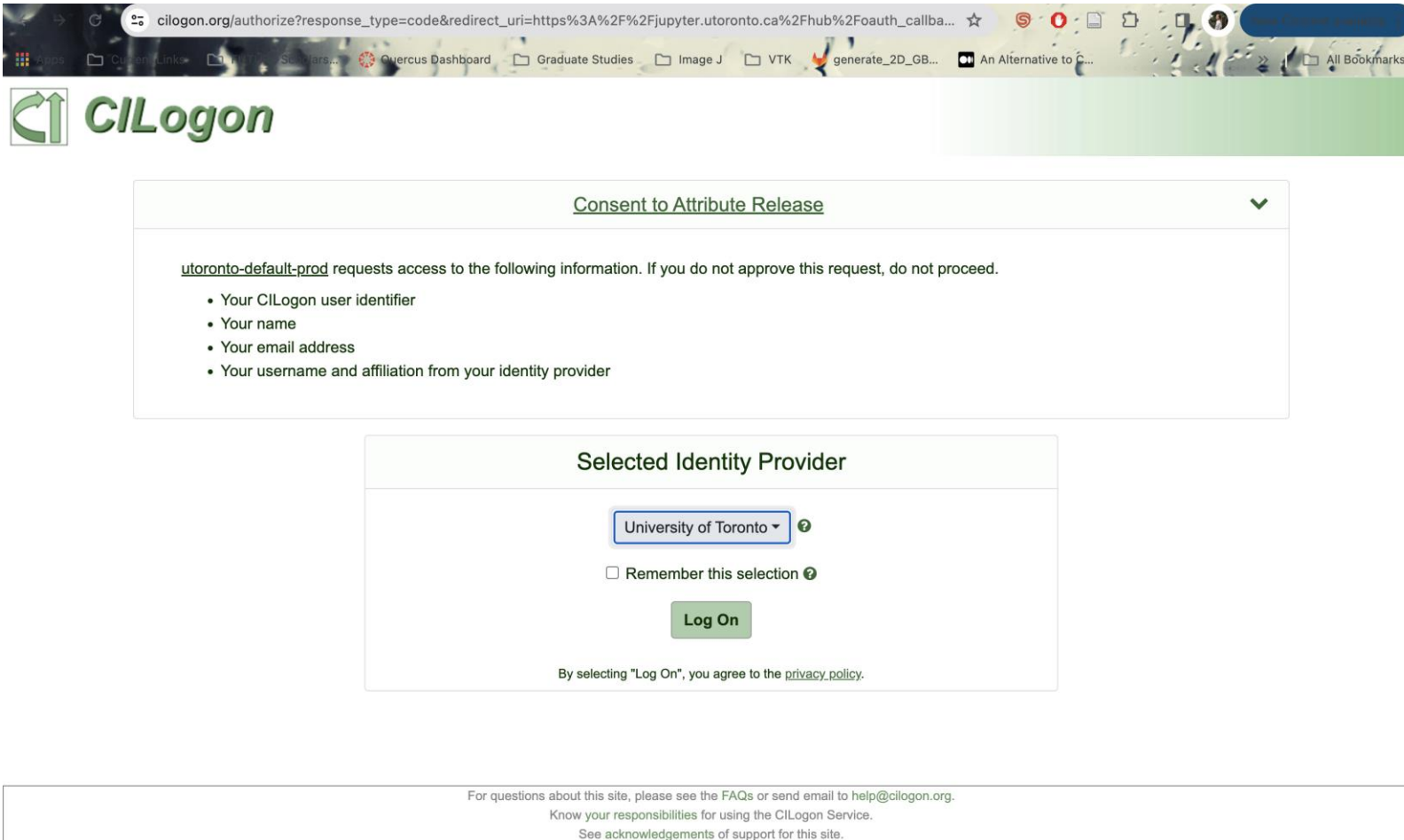
Welcome to the [University of Toronto](#) **2i2c JupyterHub**.

This is a pilot service running on open source infrastructure. See [the 2i2c Pilot documentation](#) for usage and deployment information.

 jupyter

 R Studio®

# Overview – Course Lecture Notes



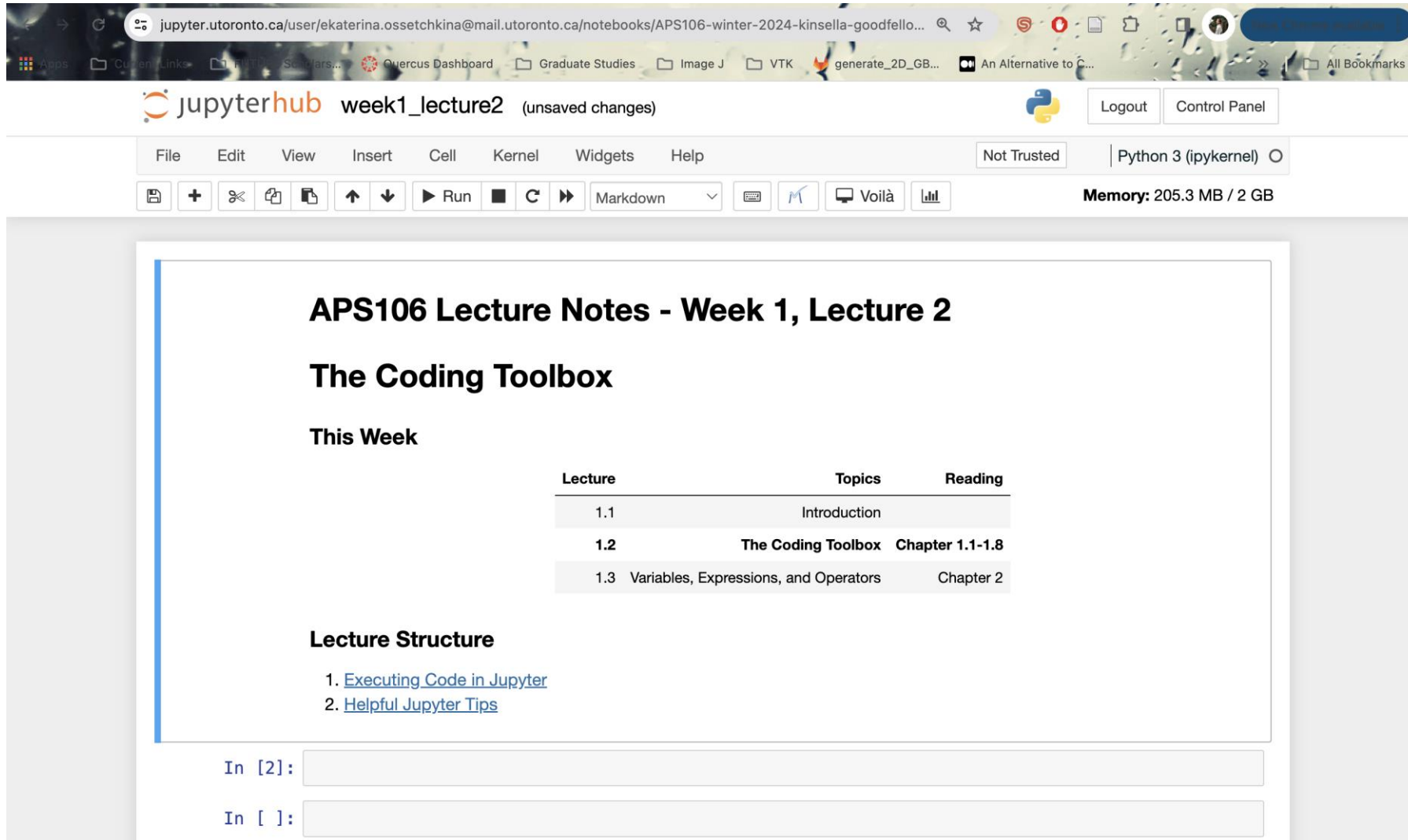
The screenshot shows a web browser window with the URL `cilogon.org/authorize?response_type=code&redirect_uri=https%3A%2F%2Fjupyter.utoronto.ca%2Fhub%2Foauth_callback...`. The browser's address bar and tabs are visible at the top. Below the browser window is the CILogon logo, which consists of a green circular arrow icon and the text "CILogon".

The main content area of the page is a light green box with a white border. It contains a section titled "Consent to Attribute Release" with a green checkmark icon in the top right corner. Below the title, there is a paragraph: "utoronto-default-prod requests access to the following information. If you do not approve this request, do not proceed." This is followed by a bulleted list of permissions: "Your CILogon user identifier", "Your name", "Your email address", and "Your username and affiliation from your identity provider".

Below the consent section is another light green box with a white border, titled "Selected Identity Provider". Inside this box, there is a dropdown menu with "University of Toronto" selected, a "Remember this selection" checkbox, and a "Log On" button. At the bottom of this box, a small line of text states: "By selecting 'Log On', you agree to the [privacy policy](#)."

At the very bottom of the page, there is a small white box with a black border containing the following text: "For questions about this site, please see the FAQs or send email to [help@cilogon.org](mailto:help@cilogon.org). Know your responsibilities for using the CILogon Service. See acknowledgements of support for this site."

# Overview – Course Lecture Notes



The screenshot shows a Jupyter Notebook interface in a web browser. The browser address bar shows the URL: `jupyter.utoronto.ca/user/ekaterina.ossetchkina@mail.utoronto.ca/notebooks/APS106-winter-2024-kinsella-goodfello...`. The Jupyter Notebook header shows the title "week1\_lecture2" with "(unsaved changes)" and a Python logo. The toolbar includes menus for File, Edit, View, Insert, Cell, Kernel, Widgets, and Help. The status bar shows "Not Trusted" and "Python 3 (ipykernel)". The memory usage is displayed as "Memory: 205.3 MB / 2 GB".

The notebook content is a Markdown document titled "APS106 Lecture Notes - Week 1, Lecture 2". Below the title is the section "The Coding Toolbox". Under "This Week", there is a table with three columns: Lecture, Topics, and Reading.

Lecture	Topics	Reading
1.1	Introduction	
1.2	<b>The Coding Toolbox</b>	<b>Chapter 1.1-1.8</b>
1.3	Variables, Expressions, and Operators	Chapter 2

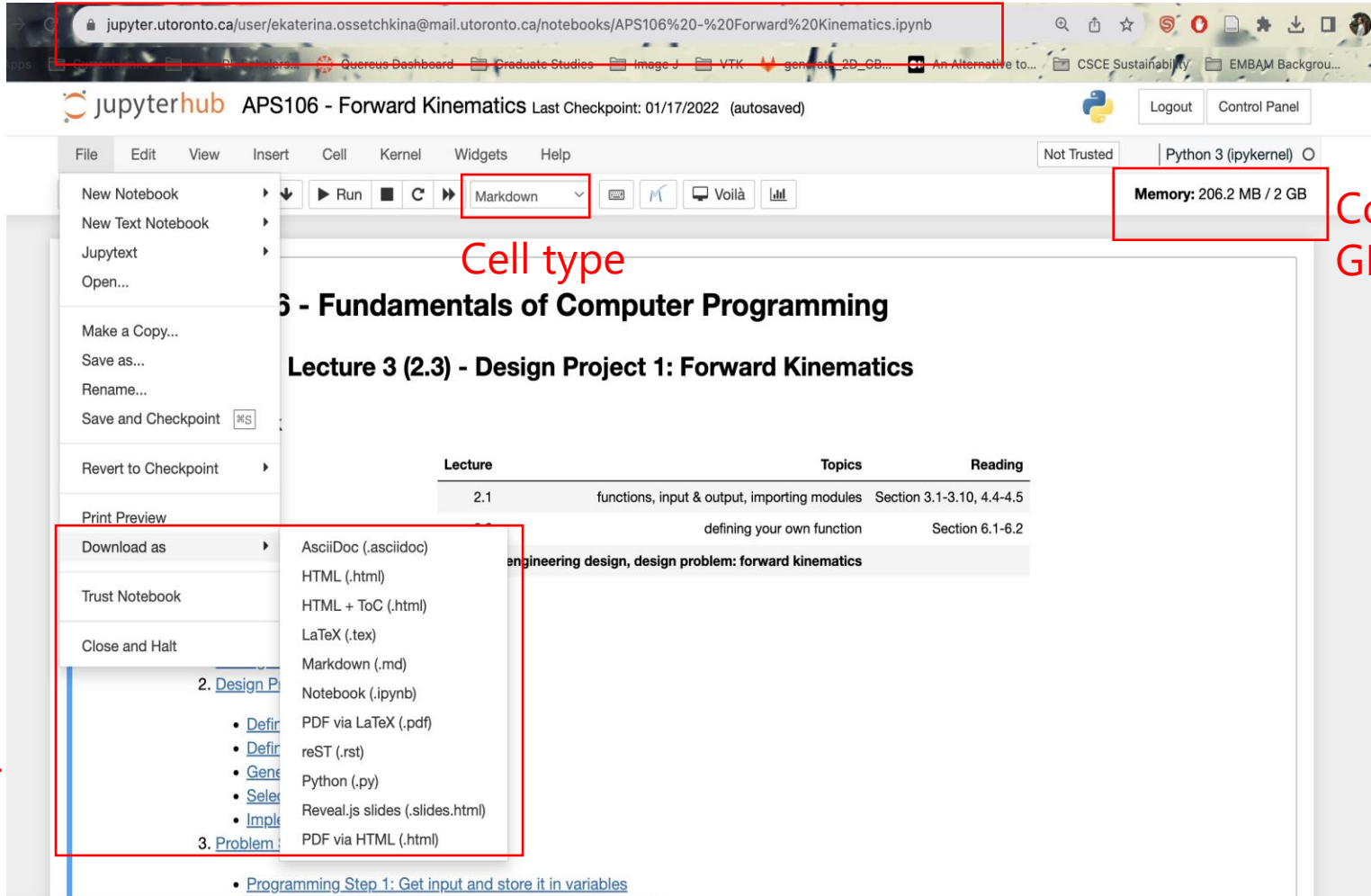
Below the table is the section "Lecture Structure" with two links:

- [1. Executing Code in Jupyter](#)
- [2. Helpful Jupyter Tips](#)

At the bottom of the notebook, there are two input boxes for code execution, labeled "In [2]:" and "In [ ]:".

# Overview – Inside a Notebook

File path on  
Jupyter  
cloud



The screenshot shows the Jupyter Notebook interface for a file named 'APS106 - Forward Kinematics.ipynb'. The browser address bar shows the file path on the Jupyter cloud. The interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help) and a toolbar with buttons for running, saving, and other actions. The 'Cell type' dropdown menu is open, showing options like 'Markdown', 'Code', etc. The 'Memory' status is displayed as '206.2 MB / 2 GB'. The notebook content includes a title 'Lecture 3 (2.3) - Design Project 1: Forward Kinematics' and a table of contents.

Lecture	Topics	Reading
2.1	functions, input & output, importing modules	Section 3.1-3.10, 4.4-4.5
	defining your own function	Section 6.1-6.2
	engineering design, design problem: forward kinematics	

2. Design Project 1: Forward Kinematics

- Defining your own function
- Generating a design problem: forward kinematics
- Implementing a solution

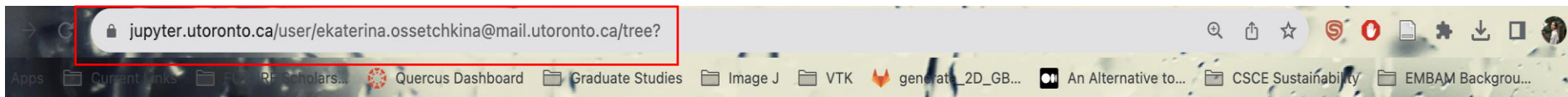
3. Problem 1: Forward Kinematics

- Programming Step 1: Get input and store it in variables

Compute used (2  
GB limit)

Download files  
locally  
(recommend in  
.ipynb or HTML  
format)

# Overview – Main Page (Directory Tree)



Return to  
tree/ main  
dashboard



Logout Control Panel

Files Running Clusters Nbextensions

Select items to perform actions on them.

Download Directory Upload New

Create new  
files

Files and  
directories

0 /		Name	
<input type="checkbox"/>	APS106-winter-2022-material	Python 3 (ipykernel)	
<input type="checkbox"/>	APS106-winter-2023-kinsella-goodfellow	R	
<input type="checkbox"/>	APS106-winter-2023-tutorials	Other:	
<input type="checkbox"/>	CIV1498-winter-2022-material	Text File	
<input type="checkbox"/>	CME538-material	Folder	
<input type="checkbox"/>	images	Terminal	
<input type="checkbox"/>	IMI-Sandbox	RStudio	
<input type="checkbox"/>	seaborn-data	Shiny	
<input type="checkbox"/>	shared	desktop	
<input type="checkbox"/>	shared-readwrite	z years ago	
<input type="checkbox"/>	APS106 - Forward Kinematics.ipynb	2 years ago	13.9 kB
<input type="checkbox"/>	Assignment 1.ipynb	9 months ago	589 B
<input type="checkbox"/>	Design_Problem_3-Wordle-Seb (3).ipynb	2 years ago	6.04 kB



# Overview – Running Page



jupyterhub

Logout Control Panel

Files **Running** Clusters Nbextensions

See everything still running

Currently running Jupyter processes

Terminals ▾	
>_ terminals/1	Shutdown
Notebooks ▾	
APS106 - Forward Kinematics.ipynb	Python 3 (ipykernel) Shutdown seconds ago

List of things running and using up compute (memory)

Shut down any notebooks or terminals still running to save memory (not enough to just close a tab)