


# Welcome Page



**DLSU-PSHS  
SUMMER INTERNSHIP PROGRAM**

## MATHEMATICAL MODELING

**WITH** DR. ANGELYN RELUCIO LAO  
MR. PAUL KWONG YU

## PROPOSED ACTIVITIES

Day Number	Planned Activities	No of Hours	Expected Output/Learning Outcomes
Day 1	Orientation	6 hours	· To have an overview of the internship program
June 20	Python Tutorial	Morning: Synchronous Afternoon: Hands-on	· To know some basic toolboxes/software that may be used for mathematical modeling (Python).

Day 2	Introduction to Mathematical Modeling, Workflow of Mathematical Modeling	6 hours	<ul style="list-style-type: none"> <li>· To gain basic understanding of the fundamental concepts of mathematical modeling.</li> </ul>
June 21	Python Example Model (Baker, Yu)	<p>Morning: Synchronous</p> <p>Afternoon: Hands-on</p>	<ul style="list-style-type: none"> <li>· To learn the workflow or process of mathematical model.</li> <li>· To gain insight from an actual mathematical model in Python.</li> </ul>
Day 3	Theoretical Concepts	6 hours	<ul style="list-style-type: none"> <li>· To learn about the theoretical/mathematical concepts of modeling.</li> </ul>
June 22	Mathematica Tutorial & Example Model (Villasin) / <a href="https://www.youtube.com/watch?v=zJafYAN5RL8">Mathematica Essentials: Intro &amp; Overview (Wolfram Language)</a> <a href="https://www.youtube.com/watch?v=zJafYAN5RL8">_(https://www.youtube.com/watch?v=zJafYAN5RL8)</a>	<p>Morning: Synchronous</p> <p>Afternoon: Hands-on / Asynchronous</p>	<ul style="list-style-type: none"> <li>· To know some basic toolboxes/software that may be used for mathematical modeling (Mathematica).</li> <li>· To gain insight from an actual mathematical model in Mathematica.</li> </ul>
Day 4	Epidemic & Network Modeling	6 hours	<ul style="list-style-type: none"> <li>· To learn about epidemic &amp; network modeling.</li> </ul>
June 23	LaTeX Tutorial / Gephi Tutorial	<p>Afternoon: Hands-on / Asynchronous</p>	<ul style="list-style-type: none"> <li>· To learn about LaTeX typesetting using Overleaf.</li> </ul>

Day 5	Scientific Communication / Presentation of Mathematical Problem	6 hours	· To develop presentation skills.
June 27	<a href="https://www.youtube.com/watch?v=Hlzk6FGrHow">How to make a research poster in PPT</a> <a href="https://www.youtube.com/watch?v=Hlzk6FGrHow">_ (https://www.youtube.com/watch?v=Hlzk6FGrHow)</a>	Morning: Synchronous	
		Afternoon: Asynchronous	
	Independent Learning		
	Webinar: Literature Review & Ethical and Legal Use of Information		
	June 28, 2022 01:00 PM		
Day 6 - 7	<a href="https://zoom.us/join/95212357216">Registration</a> <a href="https://zoom.us/meeting/register/tJEvduurqzwoG9lUbKO91azaX70ULNiwXm6a"> (https://zoom.us/meeting/register/tJEvduurqzwoG9lUbKO91azaX70ULNiwXm6a)</a>	12 hours	· To study and solve real life problems using mathematical models.
June 28 - 29	Meeting ID: 952 1235 7216 Passcode: 677072	Morning: Self-Paced	
	June 29, 2022 01:00 PM		
	<a href="https://zoom.us/join/93924671037">Registration</a> <a href="https://zoom.us/meeting/register/tJckde2uqToqGdML653slu8CrBeDTXI-o7GH"> (https://zoom.us/meeting/register/tJckde2uqToqGdML653slu8CrBeDTXI-o7GH)</a>	Afternoon: Synchronous	· To learn about the literature review process and ethical & legal use of information
	Meeting ID: 939 2467 1037 Passcode: 672324		
Day 8	Independent Learning	6 hours	· To formulate a research topic.
June 30	Guest Lecture	Morning: Self-paced	· To conduct literature search.
		Afternoon: Synchronous	· To state a research problem and/or challenge
Day 9	Concept Paper Presentation	6 hours	· To develop presentation skills.

July 1	Attend Thesis Proposal Defense	Morning: Synchronous Afternoon: Synchronous	· To gain insight from an actual thesis proposal defense in DLSU.
Day 10 - 11 July 4 - 5	Independent Learning	12 hours Self-paced	· To work on a mathematical modeling problem for the final project.
Day 12 - Day 14 July 6 - 8	DLSU Research Congress <a href="https://www.dlsu.edu.ph/conferences/research-congress/research-congress-2022">Registration (https://www.dlsu.edu.ph/conferences/research-congress/research-congress-2022)</a>	21 hours Morning: Synchronous Afternoon: Synchronous	· To observe different style of presentation skills. · To be exposed to wider variety of research topics. · To learn from other researchers' best practices.
Day 15	Presentation of Final Project	3 hours	· To develop presentation skills.
July 11	Submission of Problem Sets, Reflection Papers, and Research Journal	Morning: Synchronous	· To synthesize what was learned during the internship program.

**Note: SIP minimum of 80 work hours**