

# Meeting Minutes

**Course:** Honours Engineering Research Project (Leaky Tank Mystery)

**Minutes Documented By:** Michael Stefani

**Meeting No:** 10

**Date of Meeting:** 16/09/2024

**Location:** Remote/Online

**Time:** 3:00 pm

## 1. Attendees

<i>Present</i>	<i>Apologies</i>	<i>Absent</i>
Eric Tsoukatos (ET)		
Michael Stefani (MS)		
Prof Derek Abbott		

## 2. Previous meetings corrections

- No corrections

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## 3. Meeting Notes, Questions, Decisions, Issues

### • COMSOL Simulation

- MS and ET have been using COMSOL software to model and simulate the problem
- Simulations of water tanks with differing sizes are to occur
- Look at pre-loaded fluid models on COMSOL to use as comparison and validation

### • MATLAB Simulation

- MS is continuing calculations on MATLAB to determine the ideal tank size
- Graphs of the effect of variables on movement of the tank to be produced

### • Physical Tank

- Model of tank is completed, to be constructed by ET and MS for a faster completion time
- Risk assessment completed by MS and to be signed off by Prof Abbott to complete purchasing forms

### • Component Purchasing

- Components requiring purchasing include sheets of acrylic, waterproofing silicone sealant, a remote tap and an attachment for the hose outlet.
- Professor Abbott approved of all materials to be purchased, and to proceed with purchasing.
- Complete purchasing forms and submit on online smartsheet or speak with SET Store staff about purchasing online and in-store pickup.

### • Laminar Flow Research

- Investigate requirements for laminar flow to be achieved
- Contact Adelaide Uni lecturer for advice on how to design tank hole

### • Wikipedia Page

- Add progress to wiki page provided by Prof Abbott

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<b>4. Action Items</b>			
<i>Action</i>	<i>Assigned to</i>	<i>Due Date</i>	<i>Status</i>
Complete COMSOL simulations for models of differing size to optimise the ideal size of the equipment to be used	All	20/09/2024	In Progress
Begin using MATLAB and simulate the experiment to illustrate the expected results	All	20/09/2024	In Progress
Continue gathering any components or necessary apparatus required to simulate the experiment.	All	20/09/2024	In Progress
Provide technical resource team with a detailed plan of what is required to be built, this includes a list of materials, dimensions and and required components.	All	2/09/2024	Completed
Add progress to Wiki page, starting from week 1 to present	All	20/09/2024	In Progress
Add regular updates to the weekly diary on Wiki page	All	20/09/2024	In Progress
Complete external purchases and filling in of relevant purchase forms.	ET	16/09/2024	In Progress
Investigate requirements for laminar flow to be achieved	All	20/09/2024	In Progress
Contact Fluid Dynamics lecturer for advice on tank hole design	All	20/09/2024	In Progress