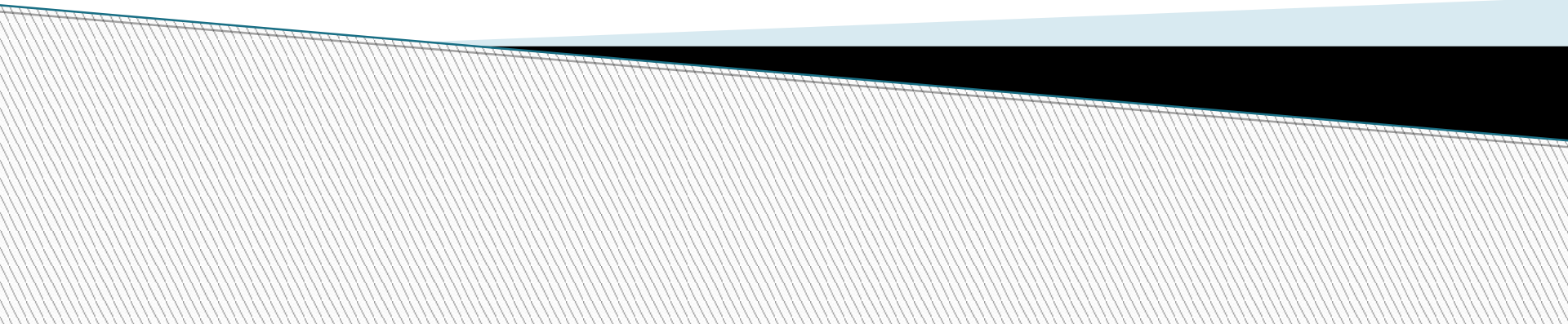


# **41012 Programming for Mechatronic Systems**

Week 4



# Overview

- Early SFS
- Peer Review
- Quiz
- Pointers – Brief Review (Quiz 2)
- Conceptual Problem
  - ▢ Shape Manipulation
  - ▢ Challenges of not using STL



➤ **What is it?**

Confidential, short online survey for each subject in week 4 of semester.

➤ **Why do it?**

Give academic staff an early indication of your learning experience in each subject.

Allow refinements to be made this semester where appropriate and feasible.

➤ **How do I do it?**

Log in at [www.sfs.uts.edu.au](http://www.sfs.uts.edu.au) – available this week only!

➤ **What else do I need to know?**

Please be constructive in your feedback!

By participating, you could win a prize and support a charity.

**THANK YOU!**

**EARLY  
FEEDBACK  
SURVEY**

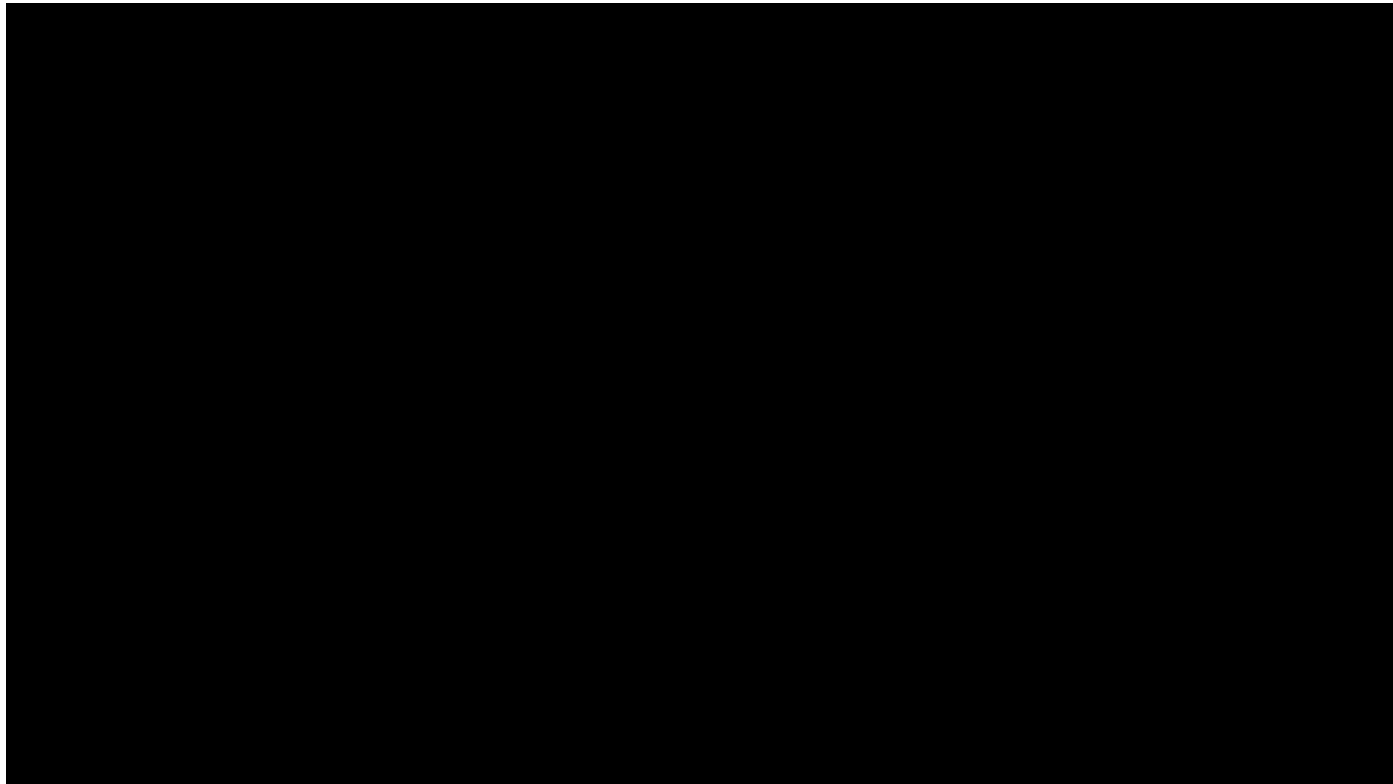


# EARLY FEEDBACK SURVEY (EFS)



Here is a message from the Vice-Chancellor about why the EFS is important:

<https://youtu.be/GGe1cR01jIM>



# Peer Review

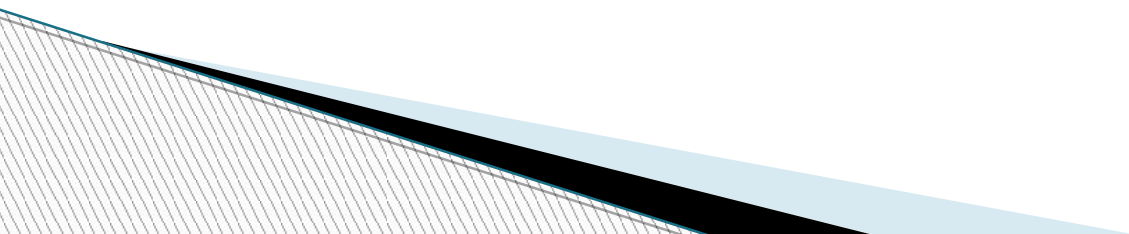
- ▶ Student provided 3 Submissions
- ▶ Peer Code Review has a weighting of 9% in the overall assessment of this course. Your peer code review of Assessment Task 1 will contribute to 3 of these 9 points
  1. Evaluates the submissions, broadly identifies submission correctness as per criteria ( $0.66 * 3 = 2$  points)
  2. Provides feedback on improving submission, meaningful feedback per submission ( $0.66 * 3 = 1$  points)
  3. Reflects on own work and identifies potential improvements from reviewed submissions or correctly justifies why own work need not be improved from interaction with reviewed submissions (0 points)
- ▶ Feedback submitted via Google Forms
- ▶ **CHANGE: Deadline for feedback on Wednesday 12th April 23:59**

# Pointers - Common Problem

- ▶ In class discussion on pointers
  - Memory location `*ptr`
  - How to move through memory `*ptr++`

# Shape Manipulation

- ▶ In class exercise : conceptualise
- ▶ Create a Function to handle Shapes
  - Rectangle
  - Circle
- ▶ Compute if a point is an inlier in a shape and determines what is the total area of all the shapes (union, not overlay)



# Shape Manipulation

- ▶ What to consider
  - How to make function cater for different shape types?
    - ▮ Base vs Derived Class
  - How to pass a function an arbitrary number of shapes?
    - ▮ Pointer / Number of Members
- ▶ USE The Week 4 – Shape Agnostic Function  
shapefunctions.cpp / shapefunctions.h
  - This implies what your classes needs to be able to complete



# Problems?

- ▶ Resolution:
  - Memory management of STL
- ▶ Not having to define the object type derived from base class with memory management
- ▶ Not having to pass the number of elements