

ENGSCI 263

Lab Exercise 1

Lab Objective

The purpose of this lab is to meet your group members and to become familiar with your group project: a resource consent. The discussions today will serve as a starting point for your modelling design proposal.

Activities

1. Find your group members and share contact details with each other.
2. Your team will be assigned a hypothetical resource consent as your project scenario. Start by downloading the corresponding data pack from the Canvas link and commit the data files to a group repository. Referring to Section 2 of the Model Design notes, discuss within your group:

Why? – What is the problem? Who are the stakeholders and what do they want? What outcomes of the resource consent are possible?

How? – Try to identify where and how a computer model could be useful.

Given? – What data have you been given? How do you propose to use it?

Assume? – Discuss and develop within your group a conceptual model for your problem. Identify what you think are the most important physics. Brainstorm the possible model domain, initial and boundary conditions, and important parameters. You will find more details about this in class later.

After 45 minutes, I will ask each group to present the Why?, How?, Given?, and Assume? Discuss your proposed conceptual model, while a group member sketches it on the whiteboard. Everybody should contribute to the presentation. Try and nominate one topic per person.

Modelling design proposal

The first group assignment is the model design proposal. This short report, written by your group, should describe the problem and how you intend to address it through computer modelling. You should meet regularly with your group to progress these assignments. Delegate tasks to pairs or individuals and try to balance the workload. If someone is not pulling their weight, let them know directly as they often won't be aware they're not meeting expectations. Serious group dysfunction should be reported to the course coordinator (j.fernandez@auckland.ac.nz).

Assessment

Assessment of this lab is participation based. All you have to do is show up and contribute to your group's discussion and presentation of their scenario. This lab is worth 2% of your final grade.