The University of Sydney

MATH1005 Statistics

sydney.edu.au/science/maths/MATH1005

Summer 2016 **COURSE OVERVIEW** 2015

Aim of Course

To gain confidence and competency in understanding data (Part1), how data arises from populations (Part2), and how to use data to test hypotheses (Part3).

Course Overview

Date	Lecture Topic	Tute	Assessment
Thurs 7/1	**1. Data Analysis** Introduction and Types of Data Graphical Summaries	Please complete Tute 1 (Intro to R) at home. Tute 2 - Graphical Summaries	
Tues 12/1 Wed 13/1	Numerical Summaries	Tute 3 - Numerical Summaries and Boxplot	
Thurs 14/1	Bivariate Data	Tute 4 - Bivariate Data	
Tues 19/1 Wed 20/1	**2. Probability and Distribution Theory** Probability	Tute 5 - Probability	Report1 10%
Thurs 21/1	Random Variables Discrete Random Variables	Tute 6 - Discrete Random Variables	Quiz1 5%
Thurs 28/1	Continuous Random Variables	Tute 7 - Continuous Random Variables	
Tues 2/2 Wed 3/2	Linear Functions of Random Variables Sums of Random Variables	Tute 8 - Sums and Functions of Random Variables	Report2 5%
Thurs 4/2	Sums of Non-Normal Random Variables (CLT) **3. Hypothesis Testing** Hypothesis Testing	Tute 9 - Sums of Non-Normal Random Variables (CLT)	Quiz2 5%
Tues 9/2 Wed 10/2	Proportion Test, Sign Test	Tute 10 - Proportion and Sign Tests	
Thurs 11/2	1 Sample and t Z Tests, Paired t Test 2 Sample Z and t Tests	Tute 11 - 1 Sample Z test	
Tues 16/2 Wed 17/2	Goodness of Fit Test Pivots and Confidence Intervals	Tute 12 - T tests	Report3 5%
Thur 18/2	Revision	Tute 13 - Goodness of Fit Test	Quiz3 5%