Syllabus for Stat 2201
Analysis of Engineering and Scientific Data

Term: Semester 1	Instructor: Dr. Sabrina Streipert
Lecture Time: Tue 3 - 5 PM	Office Hours: Fri 2 - 3 PM
Lecture Hall: 50 - T203	Office: 82E - 409
Unit: 1	E-mail: s.streipert@uq.edu.au

Literature: *Applied Statistics and Probability for Engineers*, $6^{th}/7^{th}$ edition, by D. C. Montgomery and G. C. Runger. Y.
You can purchase the book through Wiley or at Co-op book store or borrow it from the library. Further information: https://courses.smp.uq.edu.au/STAT2201/2019a/.

Description: Statistical models & analyses required for analysing engineering & scientific data, including sampling methods, exploratory data analysis, standard probability models, estimation, hypothesis tests, regression, experimental design. The data analysis is done using the statistics software **R**.
(see https://courses.smp.uq.edu.au/STAT2201/2019a/ on how to download **R**).

Prerequisite(s): MATH1050 or SA in Year 12 Maths C.

Lecture Notes: Lecture notes will be available the day after lecture on blackboard and the course web page.

Tutorials: There will be 6 tutorial sessions this semester to provide support in understanding the course material and help solve the assignments.
Super-Tutor: Dr. Vincent Mellor.

Homework: In total, there will be 6 homework assignments. Assignments will be posted on blackboard in the Learning Resource section two weeks prior to its due date. You are expected to submit your solutions as R-Markdown document on blackboard on selected Friday's by 6pm. Assignment due dates are given in Table 1.

Grading Policy: The homework assignments and a 2 hour final exam *(time and data t.b.d.)* will determine your course grade with the following rule:
Each homework assignment is worth 10 points. Your best 5 homework grades will be used (maximum of 50 points possible) and make 40% of your final grade. Your final exam grade is worth 60% of your course grade. You need to get at least 40% of the final exam in order to pass this course.

Student Disabilities Policy: If you have now or develop during this semester a physical or learning disability and you want your professor to make reasonable accommodations for that, please email stat2201@uq.edu.au.

Table 1: Semester Schedule

Week	Dates	Lecture	Tutorial	Assignment Due
1	25/2–01/3	✓	x	x
2	04/3–08/3	✓	✓	x
3	11/3–15/3	✓	x	✓
4	18/3–22/3	✓	✓	x
5	25/3–29/3	✓	x	✓
6	01/4–05/4	✓	✓	x
7	08/4–12/4	✓	✓	✓
8	15/4–18/4	✓	x	x
9	22/4–26/4	x	x	x
10	29/4–03/5	✓	✓	✓
11	07/5–10/4	✓	x	✓
12	13/5–17/5	✓	✓	x
13	20/5–24/5	x	x	✓
14	27/5–31/5	x	x	x

Anticipated[1] Schedule: *[Appl. Statistics and Prob. by Montgomery and Runger. Y.]*

Week 1: Chapter 1: Introduction, Chapter 2: Probability

Week 2: Chapter 2: Probability, Chapter 3: Discrete Random Variables

Week 3: Chapter 3: Prob. Distributions, Chapter 4: Continuous Random Variables

Week 4: Chapter 5: Multiple Random Variables, Correlations

Week 5: Chapter 5: Generating Functions, Chapter 6: Descriptive Statistics

Week 6: Chapter 7: Point Estimates and Sampling Distribution

Week 7: Chapter 8: Intervals for single Sample, Chapter 9: Hypothesis Testing

Week 8: Chapter 10: Statistical inference for two Samples

Week 9: SEMESTER BREAK

Week 10: Chapter 11: Linear Regression

Week 11: Chapter 12:Multiple Linear Regression

Week 12: Trial Exam

Week 13: No lecture

Week 14: No lecture

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[1]Deviations are possible.