

Memo for Second Full SSLC Meeting

Date and Time: 24th January 2024

1. Actions for Our Data Science Community

A. Follow up on Results of Year 1 In-depth Survey:

We conducted an in-depth survey among all Year 1 data science students in Week 12, with a response rate of 51.35%. This survey focused on students' thoughts regarding school policies, their learning experiences, career plans, and their level of participation in the Data Science community. We are currently analyzing the results of this survey, which we hope will serve as evidence to advocate for changes in school policy at the upcoming meeting.

B. Proposed Meeting with Data Science Coordinator

In TB1, we suggested a meeting with the Data Science program director to discuss various aspects of the program. The Director has agreed to arrange a meeting after Term 2. Therefore, we are now discussing the potential agenda with other Data Science course representatives. We will send the invitation soon, and hopefully we can arrange a meeting in late February.

2. Comments on Course Arrangements:

A. Concerns and Observations on TB1 Assessment:

In order to gather students' thoughts and comments about the TB1 exam, we conducted a post-exam survey among all Year 1 Data Science students after the end of the TB1 examination. A total of 26 students attempted the survey, with a response rate of 35%. ([Full results is here](#)) We have noticed the following:

- Most students agree that the **difficulty level of the examinations was fair**. However, many found the "Matrix Algebra" exam abnormally easy, possibly because one of the long questions in Part B, worth around 30 marks, was identical to a question from a problem sheet, with no alterations in content.
- Respondents agreed that they could attempt most questions in the "Applied Analysis A" and "Matrix Algebra" exams. However, **for the "Probability" exam, a significant number of students complained that the tasks were too lengthy**, leading about 30-40% of respondents to leave more than one-third of the questions unattempted.

- Most students spent around 2-5 hours preparing their notes for the exam. A majority of students **agreed that the A4 notes helped them prepare for the exam.**
- In general, students believed that **past papers and practice papers were helpful for preparing for their examinations.** Approximately 76% appreciated the lecturer of the “Applied Analysis A” course for providing clear and helpful advice for their assessment. However, they expressed a desire for more exercises in both the “Applied Analysis A” and “Matrix Algebra” courses.
- About **60% of students reported feeling anxious about preparing for exams,** with reason attributing this anxiety to:
 - i) Self-imposed pressure due to high expectations;
 - ii) Struggles with understanding abstract mathematical concepts;
 - iii) Fear of getting failed due to a lack of practice exercises.
- We have received a complaint that students' performance was negatively affected because a mobile device kept producing noise for about 5 minutes during the middle of the “Applied Analysis A” exam.

B. Suggestions on Assessment Arrangements:

1. Despite the fact that the “Applied Analysis A” course covers more content than other subjects, students are less reliant on the notes they bring to the exam. This is primarily because the examiner provided useful formulas during the exam, eliminating the need for students to memorize them. We suggest that similar courses, such as “Applied Analysis B” could adopt a similar arrangement, so that students do not need to transcribe complex formulas in the exams.
2. The school should check whether a large proportion of students leave more than 30% of the “Probability” exam unattempted. If so, the school may need to reconsider the length of the paper in the future exams.
3. As “Applied Analysis A” and “Matrix Algebra and Linear Models” are new courses, with students only relying on problem sheets and past papers, we recommend the courses to include more extra exercises. For example, for the “Matrix Algebra and Linear Models” course, the lecturer could provide a list of questions from the recommended textbook that related to the course syllabus.

B. Course Arrangements

Some students complained that they couldn't hear what the lecturer was saying in the Victoria Room during the Monday Statistics lecture. We hope that the school can help by changing the venue to another lecture hall.

3. Concerns on Impacts of New SAY on 2024/25

We have noticed that the school authority will make changes to the course structure in the upcoming academic year. TB1 examinations will be completed before the winter break and there will be changes of teaching blocks for some Data Science courses. We have the following concerns:

1. We agree that conducting exams before Christmas will have a positive impact on student well-being. Considering a 'catch-up week' and 'Assessment Preparation week' will be available in TB1 (Week 6 and Week 12) and TB2 (Week 18 and Week 24), theoretically students will have two weeks of preparation before the exams, in which the new arrangement will have minimal impacts on their academic performance.
2. However, we noticed Data Science students had to attend 9-10 hours for lectures/ tutorials during their 'catch-up week' this year. In order to let students concentrate on preparing their assessments, we hope the school authority can reduce the number of tutorials and lectures in these weeks.
3. We express support for next year's proposed course structure for year 2 students, who are part of the 2024-2025 cohort.
4. We are concerned about the possible negative impacts of condensing the Probability and Statistics course into one Teaching Block. Given that Probability and Statistics are vital to data science, and considering the course's intense content, we worried removing some of the course content, such as proofs of statistical equations or theories, may affect our preparation for further studies.
5. At the same time, the Algorithms and Programming in C(++) and R will also be compressed into the first Teaching Block. We concerned that:
 - A. Students require knowledge from the Statistics course in order to process basic machine learning in C++ and R language. As the proposed timetable will contain Algorithms and Programming in TB1 then Probability and Statistics in TB2, we worry that students might not have enough knowledge to complete the assessed coursework for Algorithms and Programming.
 - B. Under the proposed time table for next year, students need to learn 4 programming languages in TB1 (Python, C, C++ and R), but in TB2, they only need to learn Python. We are concerned that students with no prior coding knowledge will struggle immensely with this course structure. We believe learning about how to think computationally through complex algorithms is a critical skill for being a data scientist. Learning a

computational language within 3-6 weeks without chances to do further self-practicing is an unhealthy way to learn coding.

We suggest that the course structure should continue throughout the whole year, and changing the assessment method to 100% coursework might be a feasible option to avoid the aforementioned problem.

4. Other Issues:

About the arrangements for the Offer Holder Events

Some students participated in the offer holder event hosted in late March last year, but the student ambassadors were unable to provide useful and relevant information as they were not studying Data Science. Since the experiences of Maths students differ significantly from those of Data Science students, it is recommended that in the upcoming Offer Holder Event, the school should ensure the presence of sufficient students and staff who are familiar with Data Science to assist with questions and inquiries from Data Science offer holders.