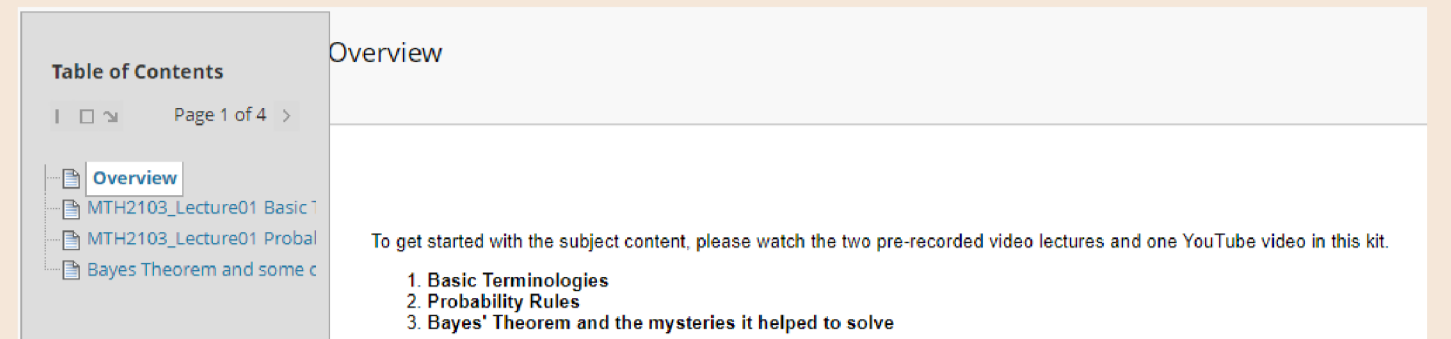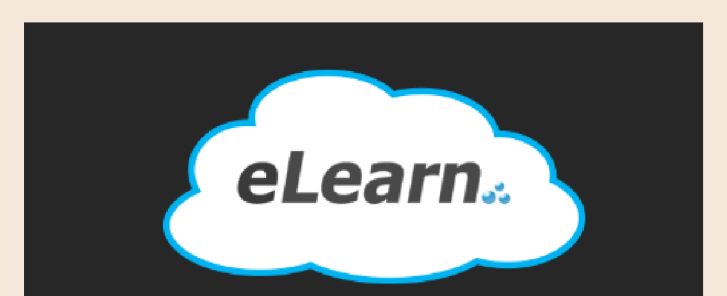# Pre-Lecture Preparation Kit: An eLearn Learning Module for Flipped Classroom

eLearn.

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To get started with the subject content, please watch the two pre-recorded video lectures and one YouTube video in this kit.
- Overview
- MTH2103_Lecture01 Basic
- MTH2103_Lecture01 Probal
- Bayes Theorem and some o

1. Basic Terminologies
2. Probability Rules
3. Bayes' Theorem and the mysteries it helped to solve

1 Background

Final year students in the BSc (Hons) IT (Computer Security and Networking) programme are required to take a subject in probability and statistics. Students have different knowledge level on statistics and some do not have the necessary foundation expected. Flipped learning approach has been introduced since 2019.

2 Challenge

As students transition to return to campus post-pandemic, combination of pre-class preparation, in-class activities during online lecture and F2F tutorials can be overwhelming if it is not well-managed.

3 Objectives

↓ To alleviate confusion and uncertainty on pre-class preparation requirements in a flipped learning environment.

↑ To improve student engagement with pre-class learning materials in a flipped learning environment.

4 Strategy

Overall structure of flipped learning materials has to be well-organized [1]. To enhance inclusivity and online learning experience by leveraging eLearn as a course site, a pre-lecture preparation kit is prepared for each week on eLearn throughout the March 2022 semester.

Learning materials and activities within the kit are to be completed as a package before students join the online live lecture class which focus on Q&A, discussion, ungraded quizzes or Padlet activity.

Using the Learning Module block on eLearn, these "kits" are structured as follows [2]:
- Overview
- Pre-recorded video lecture
- Supplementary materials such as YouTube videos, websites, articles, etc
- Lecture slides

5 Findings and Impact

85%

Students' subject evaluation on the following items increased from previous semester.

The subject was well structured.

The learning resources assisted my learning in this subject.

"Well-organised."

"Online materials were presented systematically."

"Educational videos which were interesting enough to be watched entirely."

"The way she organizes learning materials in eLearn is tidy. I can easily navigate myself in eLearn."

6 Recommendations

⊕ Additional optional materials can be curated and included in the pre-lecture kits for interested students or those who would like to have extra exercises.

References

[1] McNally, B., Chipperfield, J., Dorsett, P. et al. Flipped classroom experiences: student preferences and flip strategy in a higher education context. High Educ 73, 281–298 (2017). https://doi.org/10.1007/s10734-016-0014-z

[2] Jensen, J.L., Holt, E.A., Sowards, J.B. et al. Investigating Strategies for Pre-Class Content Learning in a Flipped Classroom. J Sci Educ Technol 27, 523–535 (2018). https://doi.org/10.1007/s10956-018-9740-6