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A STUDY ON THE ACOUSTICAL ENVIRONMENT OF UITM SHAH ALAM LECTURE HALLS BY MEANS OF SPEECH INTELLIGIBILITY

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ABSTRACT

The objective of this Dissertation is to measure the Room Criteria, Reverberation Time and Speech Intelligibility (Rapid Speech Transmission Index, RASTI) of lecture halls in UiTM Shah Alam. The objective of this study is also to find out the acoustical and architectural design of these lecture halls that influence the elements that need to be measured. The results of the measurement are then will be used to compare and match with the shape, design and interior finishes of each lecture halls.

In order to obtain these objectives, five lecture halls in main campus of UiTM had been selected. They are lecture halls of Faculty of Architecture, Planning and Surveying (FSPU), Faculty of Civil Engineering (FKA), Faculty of Mechanical Engineering (FKM), Faculty of Applied Sciences (FSG) and DK1 of Sultan Abdul Aziz Shah Menara lecture hall. The measurements of lecture halls have been carried out using equipments from FSPU Acoustics Laboratory.

From the observation, it was found that the DK 1 Menara lecture hall is fan shapes while the other four lecture halls are in rectangular shapes. The

design and interior finishes of ceiling, wall and floor for five lecture halls are not standardize at all. Based on the measurements results, The Speech Intelligibility Index (RASTI) for FKA lecture hall is 'Excellent' (0.83), while FSPU and FSG are 'Good' (0.73) and 'slightly good' (0.65) respectively. For DK1 Menara and FKM lecture halls, the RASTI value is (0.58) and (0.59) respectively, classified as 'Fair'. The FKA is considered as an excellent in speech because this lecture hall is very good in terms of its design and interior finishes which these elements affect very much on the performances of the sound in the lecture halls.

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I hope that the study on the acoustical environment of UiTM Shah Alam lecture halls will contribute to further improvement for such excellent lecture halls in the future.

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TABLE OF CONTENTS