



**UNIVERSITI TEKNOLOGI MARA**

**MAE414: FUNDAMENTAL OF DATA MANAGEMENT FOR PRIMARY SCHOOL TEACHERS**

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| <b>Course Name (English)</b>  | FUNDAMENTAL OF DATA MANAGEMENT FOR PRIMARY SCHOOL TEACHERS<br><b>APPROVED</b>   |
| <b>Course Code</b>  | MAE414  |
| <b>MQF Credit</b>   | 3   |
| <b>Course Description</b>   | This course discusses the mathematical content in the area of statistics which covers the topics of average and data representation. It provides an introduction to the fundamental methods of data management in tabulation, graph production and descriptive statistics. This includes introduction to different types of data (measurement scales), and ways to present data (tables and graphs). This will be followed by the introduction to different frequency distributions and descriptive statistics, including mean, mode, median and measures of variance (standard deviation). The focus will be on both concepts and numbers computations with greater emphasis on the former. Students will also examine knowledge of children's thinking and learning of the above topics. The development of pedagogical content knowledge for certain topics will be discussed in detail. |
| <b>Teaching Methodologies</b>   | Lectures, Blended Learning, Tutorial, Discussion  |
| <b>CLO</b>  | <p>CLO1 Students should be able to define and display statistical terms and statistical data related to data management and its development.</p> <p>CLO2 Students should be able comprehend the rationale for different methods of data presentation.</p> <p>CLO3 Students should be able to define and select an appropriate measure of central tendency and measure of dispersion for a given set of data.</p> <p>CLO4 Students should be able to discuss the difficulties and misconceptions faced by pupils in the learning of data management concepts.</p> <p>CLO5 Students should be able to construct pedagogical content knowledge for concept development in data management.</p> <p>CLO6 Students should be able to solve problems related to data management.</p>   |
| <b>Pre-Requisite Courses</b>  | No course recommendations   |
| <b>Topics</b>   |   |
| <b>1. Introduction to Statistical and Basic Statistical Terms</b><br>1.1) n/a |   |
| <b>2. Displaying Statistical Data</b><br>2.1) n/a                             |   |
| <b>3. Measures of Central Tendency</b><br>3.1) n/a                            |   |
| <b>4. Measures of Variability/Dispersion</b><br>4.1) n/a                      |   |
| <b>5. Test</b><br>5.1) n/a  |   |

| Assessment Breakdown  | %      |
|-----------------------|--------|
| Continuous Assessment | 60.00% |
| Final Assessment      | 40.00% |

| Details of Continuous Assessment | Assessment Type | Assessment Description | % of Total Mark | CLO                       |
|----------------------------------|-----------------|------------------------|-----------------|---------------------------|
|                                  | Discussion      | i discussion           | 10%             | CLO2 , CLO4               |
|                                  | Group Project   | n/a                    | 30%             | CLO1 , CLO2 , CLO3 , CLO5 |
|                                  | Test            | n/a                    | 20%             | CLO1 , CLO2 , CLO3 , CLO6 |

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| <b>Reading List</b>       | This Course does not have any book resources   |
| <b>Article/Paper List</b> | This Course does not have any article/paper resources  |
| <b>Other References</b>   | <ul style="list-style-type: none"> <li>• n/a R.V Hogg &amp; E.A Tanis 2009, <i>Probability and Statistical Inference</i>, Pearson Prentice Hall.</li> <li>• n/a Mann , Prem S. 2010, <i>Introductory Statistics</i>, John Wiley</li> <li>• n/a H. Halilah, I. Mohd Said &amp; Y. Fatimah 2002, <i>Business Statistics</i>, Uitm Document Services Sdn. Bhd., Shah Alam</li> <li>• n/a Graham A. Jones 2005, <i>Exploring Probability in School: Challenges for Teaching and Learning</i> , Springer US.</li> </ul> |