

Universiti Teknologi MARA

**Choosing Bachelor Degree Programmes
for Universiti Teknologi MARA Diploma
Students Using Fuzzy PROMETHEE**

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STUDENT'S DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



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ABSTRACT

Diploma students who want to pursue their studies in bachelor's degree have to make an important decision which is choosing a programme that they want to study in. This is a tough decision because it involves their future. Furthermore, there are many programmes that are available to choose from as well as many criteria that need to be considered which add to the complication of humans' subjective thinking and uncertain minds. This study aimed to rank a list of selection of bachelor's degree programmes in Mathematical Sciences and to compare fuzzy decision with the original decision. Five Mathematical Sciences Bachelor's Degree Programmes had been taken into consideration namely Mathematics, Actuarial Sciences, Statistics, Computational Mathematics and Management Mathematics. These Mathematical Sciences Bachelor's Degree Programmes were ranked based on four criteria which are interest, ability, parent's influence and career opportunities. A final semester student of Diploma in Mathematical Sciences at Universiti Teknologi MARA Perlis was selected as the decision maker for this study. The ranking was done using fuzzy PROMETHEE method. It was found that the most preferred programme by the diploma student was Bachelor of Science in Mathematics and the least preferred programme was Bachelor in Actuarial Sciences. The comparison result showed that the student was certain about his first, second and last choice but was confused about his third and fourth option. This study proved that fuzzy PROMETHEE can help overcome the confusion. Diploma students who are in dilemma to choose programmes for their bachelor's degree study can definitely benefit from this study.

Keywords: Fuzzy PROMETHEE, MCDM, choosing bachelor's degree programme, UiTM, Mathematical Sciences

TABLE OF CONTENTS

CONTENTS	PAGE
SUPERVISOR'S APPROVAL	ii
DECLARATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	vi
TABLE OF CONTENTS	vii
LIST OF FIGURES	ix
LIST OF TABLES	x
 CHAPTER ONE: INTRODUCTION	
1.1 Background of the Study	1
1.2 Problem Statement	5
1.3 Objective of the Study	6
1.4 Scope of the Study	6
1.5 Significance of the Study	6
 CHAPTER TWO: LITERATURE REVIEW	
2.1 Choosing University Programme for Bachelor's Degree Study	7
2.2 Criteria for Choosing University Programme	8
2.2.1 Interest	8
2.2.2 Ability	9
2.2.3 Parent's Influence	10
2.2.4 Career Opportunities	10
2.3 Fuzzy Sets and Fuzzy Numbers	11
2.4 Multi criteria Decisison Making (MCDM)	12
2.5 PROMETHEE	14
2.6 Fuzzy PROMETHEE	15

CHAPTER THREE: RESEARCH METHODOLOGY

3.1	Data Collection Method	17
3.2	Steps in Fuzzy PROMETHEE	18
3.3	Summary	21

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1	Alternatives, Criteria, Decision Maker, and Data	22
4.1.1	Mathematical Sciences Bachelor's Degree Programmes in UiTM (Alternatives)	22
4.1.2	Criteria	24
4.1.3	Decision Maker and Data	24
4.2	Data Analysis	27
4.3	Results and Discussions	35
4.3.1	Ranking of Bachelor's Degree Programme	35
4.3.2	Comparison of Fuzzy PROMETHEE ranking with decision maker's original ranking	36

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1	Conclusions	38
5.2	Recommendations	40

REFERENCES	41
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