Planning and Quality Assurance Affairs

Course Specifications

General Information

Course name	Principles Of Mathematics
Course number	MATH2304
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - encourage a view of mathematics analysis as a way of thinking and as a language for communicating ideas

2 - build a broad mathematical foundation combined with the depth of mathematical analysis and other field of sciences

Intended Learning Outcomes

Knowledge and Understanding	* Clarify the fundamental concepts, principles and theories relating to mathematical analysis
	* Define set, inclusive, element, object, and roster notatio
	* Identify the elements of a given set
Intellectual Skills	* Conclude the essential facts, concepts, principles and theories relating to mathematical Analysis and their relationship to one another
	* Apply mathematical analysis method in solving problems
Professional Skills	* Describe conventions used to list sets
	* List the elements of a set by describing the set and the rules that its elements follows.
	* Perform basic set operations and determine set equivalence and the cardinality of sets
	* Perform basic arithmetic operations on cardinal numbers.
General Skill	* Lead team work effectively for solving problems

Course Contents

1 - Logic and mathematical proofs
2 - Set theory
3 - Relations
4 - Functions
5 - Counting and cardinality

Teaching and Learning Methods

1 - Lectures, Assignments, Discussion, Solving Problems

Students Assessment

Assessment Method	TIME	MARKS
Quizzes and Assignments		10
First Mid Term	Week 5	20
Second Mid Term	Week 10	20
Final Exam	Week 16	50

Books and References

Essential books	2. Smith, D., Eggen, M. and Andre, E. St. (2006). A transition to advanced mathematics 6th
Recommended books	3. You-Feng Lin and Shwu Yeng T Li (1985) Set Theory with Applications, Mancorp Publishing