Course Specifications

Course Title:	Introduction to Mathematics 1
Course Code:	**PMTH 112**
Program:	**First Common Year**
Department:	**First Common Year**
College:	**Deanship of First Common Year**
Institution:	**Majmaah Univeristy**

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A. Course Identification

1. Credit hours: 4
2. Course type **a.** University ☐ College ☒ Department ☐ Others ☐ **b.** Required ☒ Elective ☐
3. Level/year at which this course is offered: 1st level / 1st year
4. Pre-requisites for this course (if any)**:** --
5. Co-requisites for this course (if any)**:**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	30	100%
2	**Blended**		
3	**E-learning**		
4	**Correspondence**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	30
2	**Laboratory/Studio**	-
3	**Tutorial**	-
4	**Others** (specify)	-
	Total	30
Other Learning Hours*		
1	**Study**	8
2	**Assignments**	4
3	**Library**	4
4	**Projects/Research Essays/Theses**	-
5	**Others** (specify)	-
	Total	16

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

An understanding of the basics, necessary background and importance of the Mathematics, apply the basic rules, concepts, principles and theories.

2. Course Main Objective

The main purpose of this course is the acquisition of basic concepts and skills in mathematics and taking responsibilities to solve problems pertaining to these concepts and skills.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge:**	
1.1	Learning some basic math concepts	
1.2	Learning properties of the linear equation	
1.3	Learning some different ways to solve the nonlinear equations	
1.4	Learning some types of inequalities	
1.5	Studying Some Concepts in the analytic geometry	
1.6	Learning the functions Characteristics and operation function	
1.7	Learning some types of special functions (exponential and logarithmic functions)	
2	**Skills :**	
2.1	Applying the mathematical concepts they learned to solve some algebraic problems	
2.2	Graphing the linear equation	
2.3	Solving some problems of inequalities	
2.4	Solving the nonlinear equations with different methods	
2.5	Contrasting logarithmic with exponential functions	
3	**Competence:**	
3.1	Develop certain teamwork responsibility activities.	
3.2	Prepare and present certain topics during the semester, look out for certain issues in the course.	
3.3	Use internet for further problems	

C. Course Content

No	List of Topics	Contact Hours
1	Preliminary Concepts	8
2	Equations and Inequalities	6
3	Functions and Graphs	6
4	Polynomial and Relational Function	4
5	Exponential and Logarithmic Functions	6
Total		30

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Learning some basic math concepts	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.2	Learning properties of the linear equation	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.3	Learning some different ways to solve the nonlinear equations	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.4	Learning some types of inequalities	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.5	Studying Some Concepts in the analytic geometry	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.6	Learning the functions Characteristics and operation function	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.7	Learning some types of special functions (exponential and logarithmic functions)	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
2.0	**Skills**		
2.1	Applying the mathematical concepts they learned to solve some algebraic problems	Solving problems	Quizzes, written exams
2.2	Graphing the linear equation	Graphing	Quizzes, written exams
2.3	Solving some problems of inequalities	Solving problems	Quizzes, written exams
2.4	Solving the nonlinear equations with different methods	Solving problems, graphing	Quizzes, written exams
2.5	Contrasting logarithmic with exponential functions	Solving problems	Quizzes, written exams
3.0	**Competence**		
3.1	Develop certain teamwork responsibility activities.	Discussion	Evaluation of teamwork
3.2	Prepare and present certain topics during the semester, look out for certain issues in the course.	Presentation under supervision	Evaluation of Presentations
3.3	Use internet for further problems	Solving problems	Evaluation of problems

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	First exam	7-8	20%
2	Second exam	12-13	20%
3	Quizzes	During the semester	10%
4	Participation	---	10%
5	Final exam	17-18	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice : Every group of students have an academic counselor who is responsible to guide students, other consultation provided by the course teacher who has at least four office hours which help the students and give them advice.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Introduction to Math 1 compiled from Introduction to calculus by M. Zahri and College Algebra and Trigonomeetry by M. Lial
Essential References Materials	Howard Anton, Elementary linear algebra, Wiley, 2013 , 11 th Edition Rhonda Huettenmueller, Pre-calculus Demystified, McGraw Hill, 2012, 2nd edition
Electronic Materials	www.khanacademy.org/math www.coolmath.com www.youtube.com www.wikipedia.com
Other Learning Materials	Microsoft office, Adobe

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms with 20 chairs
Technology Resources (AV, data show, Smart Board, software, etc.)	Data show, Smart boards, Microsoft office, Adobe
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	---

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	Direct
Extent of achievement of course learning outcomes	Students	Direct

Evaluation Areas/Issues	Evaluators	Evaluation Methods

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	