Course Specifications

Institution:	Majmaah University
Academic Department :	Basic science
Programme :	Preparatory year
Course :	Introduction to Mathematics 2 (PMTH127)
Course Coordinator :	Mutaz Shatnawi
Programme Coordinator :	....
Course Specification Approved Date :	..../ ... / ...... H

A. Course Identification and General Information

1 - Course title : Introduction to Mathematics (2)	Course Code: PMTH127
2. Credit hours : (4)	
3 - Program(s) in which the course is offered: Engineering path	
4 – Course Language : English	
5 - Name of faculty member responsible for the course: Mutaz Shatnawi	
6 - Level/year at which this course is offered : Preparatory year	
7 - Pre-requisites for this course (if any) : **PMTH112**	
8 - Co-requisites for this course (if any) : no Co-request	
9 - Location if not on main campus **: Preparatory year building**	

10 - Mode of Instruction (mark all that apply)

		What percentage?	
A - Traditional classroom	64	What percentage?	**100 %**
B - Blended (traditional and online)		What percentage?	……. %
D - e-learning		What percentage?	……. %
E - Correspondence		What percentage?	……. %
F - Other		What percentage?	……. %

Comments :

....

B Objectives

What is the main purpose for this course?
Study trigonometric functions and trigonometric identities with applications
Using Elimination and Substitution Methods to solve linear and nonlinear systems
Studying Matrices With applications
Discussing an introduction to Analytical Geometry
Studying the three Conic sections (Parabola, ellipse and Hyperbola)
Studying limits and continuity
 Studying some rules in differentiation with application

Briefly describe any plans for developing and improving the course that are being implemented :
Using smart board and an electronic stage
Student participation in teaching procedures

C. Course Description
1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
Trigonometric Functions & Polar coordinates	3	12
Systems of linear and nonlinear equations	1	4
Matrices	3	12
Conic sections	4	16
Limits & Continuity	3	12
Derivatives	2	8

2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	64	....	....	....	....	64
Credit	64	....	....	....	....	64

3. Additional private study/learning hours expected for students per week.

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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Study trigonometric functions and trigonometric identities with applications	Discussing Power point presentation By team Work Educational videos	Periodical tests Discussing
1.2	Using Elimination and Substitution Methods to solve linear and nonlinear systems		
1.3	Studying Matrices With applications		
1.4	Discussing an introduction to Analytical Geometry and Studying the three Conic sections (Parabola, ellipse and Hyperbola)		
1.5	Studying limits and continuity		
1.6	Studying some rules in differentiation with application		
2.0	**Cognitive Skills**		
2.1	**Identification of mathematical concepts in Trigonometric functions**	Lectures	Periodical tests
2.2	**Studying different ways to solve the system of equations**	Educational videos	Discussing
2.3	**Studying an analytic geometry**	Practical activities	
2.4	**Comparison among conic sections**		

		NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
2.5		Identify the concept of the limit with solving.		
2.6		Identify the concept of the dirivative with solving.		
3.0	**Interpersonal Skills & Responsibility**			
3.1		**Team work inside the holes**	Discussing	Evaluation of team work
3.2		**Discussing Groups during the lectures**	Presentations	Evaluation of Discussing Groups
3.3				
3.4				
3.5				
3.6				
4.0	**Communication, Information Technology, Numerical**			
4.1		**Preparing a good Presentation (collecting required information)**	Presentation under supervision	Evaluation of Presentation
4.2				Evaluation of Preparing
4.3				
4.4				
4.5				
4.6				
5.0	**Psychomotor**			
5.1		**Solving Problems**	Theoretical explanation	Evaluation of Solving
5.2			Educational videos	
5.3				
5.4				
5.5				
5.6				

5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total

			Assessment
1	**First exam**	7	25%
2	**Second exam**	13	25%
3	**Participation**	During the semester	10%
4	**Final exam**	18	40%
5	....	....	....
6	....	....	....
7	....	....	....
8	....	....	....

D. Student Academic Counseling and Support

One hour daily (Office hours)

E. Learning Resources

1. List Required Textbooks :
- Mathematics 1 & 2 PYP, Young Anton.

2. List Essential References Materials :
- Elementary linear algebra, Howard Anton, 11 th Edition, Wiley

3. List Recommended Textbooks and Reference Material :
- ....
- ....
- ....

4. List Electronic Materials :
- **Youtube.com**
- **Wikipedia**
- ....

5. Other learning material :
- **Microsoft office**
- ....
- ....

F. Facilities Required

1. Accommodation
- **Classrooms**
- **Demonstration rooms**
- ....

2. Computing resources
 Data show, Smart boards, Software.

3. Other resources
- ....

- ....
- ....

G   Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching: • Written tests during the course Observation
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor : • Following up by evaluation unit (quality center) • External auditing
3 Processes for Improvement of Teaching : • **Evaluating and following up by department council** • **Feedback by student notes** • ....
4. Processes for Verifying Standards of Student Achievement • **Statistical Processes For students results** • **Re-checking for answer sheets samples by department council** • **Re-checking for answer sheets samples by external committee**
5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement : • .... • .... • ....

Course Specification Approved
Department Official Meeting No (…..) Date … / …. / ….. H

Course's Coordinator

Name :   Mutaz Shatnawi
Signature :   ....
Date :   …./ … / …… H

Department Head

Name :   ....
Signature :   ....
Date :   …./ … / …… H