



جامعة المجمعة
Majmaah University

رؤية
VISION
2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

COURSE SPECIFICATIONS (CS)

Ramadan 1438 H , June 2017

Institution:	Majmaah University
Academic Department :	Preparatory year deanship
Programme :	Engineering/Computer Sciences/Sciences
Course title and code:	Introduction to Mathematics 2 / PMTH 127
Specification Approved Date :	1 / 10 / 2018

Course Specifications

Institution: Majmaah University	Date: 1/10/2018
College/Department : Preparatory Year Deanship	

A. Course Identification and General Information

1. Course title and code: Introduction to Mathematics 2 / PMTH 127																				
2. Credit hours: 4 hours																				
3. Program(s) in which the course is offered. Engineering, Computer Sciences and Sciences colleges																				
4. Name of faculty member responsible for the course Mr. Mohammad Sudqi Mustafa																				
5. Level/year at which this course is offered: 2 nd level / 1 st year (Preparatory Year)																				
6. Pre-requisites for this course (if any): PMTH 112																				
7. Co-requisites for this course (if any): None																				
8. Location if not on main campus: PY building in Almajmaah male branch, PY in Almajmaah female branch, PY in Almajmaah male branch, PY in Alzulfi female branch																				
9. Mode of Instruction (mark all that apply):																				
<table style="width: 100%; border: none;"> <tr> <td style="width: 40%;">a. traditional classroom</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">What percentage?</td> <td style="width: 20%; text-align: center;"><input type="text" value="100 %"/></td> </tr> <tr> <td>b. blended (traditional and online)</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>What percentage?</td> <td style="text-align: center;"><input type="text"/></td> </tr> <tr> <td>c. e-learning</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>What percentage?</td> <td style="text-align: center;"><input type="text"/></td> </tr> <tr> <td>d. correspondence</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>What percentage?</td> <td style="text-align: center;"><input type="text"/></td> </tr> <tr> <td>f. other</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>What percentage?</td> <td style="text-align: center;"><input type="text"/></td> </tr> </table>	a. traditional classroom	<input checked="" type="checkbox"/>	What percentage?	<input type="text" value="100 %"/>	b. blended (traditional and online)	<input type="checkbox"/>	What percentage?	<input type="text"/>	c. e-learning	<input type="checkbox"/>	What percentage?	<input type="text"/>	d. correspondence	<input type="checkbox"/>	What percentage?	<input type="text"/>	f. other	<input type="checkbox"/>	What percentage?	<input type="text"/>
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Comments:																				



B Objectives

1. What is the main purpose for this course?

This course aims at providing make a pre-calculus background for the student by studying trigonometric functions, solving linear and nonlinear equations systems, studying Matrices, and obtaining a brief introduction to the limits and continuity and rules of differentiation and Integration.

- 2. Briefly describe any plans for developing and improving the course that are being implemented.
- Plans that are being implemented for developing and improving the course:
 - Continuous updating of the information, knowledge and skills included in the course through continuous search for new knowledge and skills available in recent publications (references, books, researches, magazines, internet....).
 - Verifying the information resources.
 - Continuous evaluation of the course content, student level, and develop plans accordingly

C. Course Description (Note: General description in the form used in Bulletin or handbook)

Course Description:

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Trigonometric Functions & Polar coordinates	4	16
Systems of linear and nonlinear equations	1	4
Matrices	1	4
Limits & Continuity	4	16
Derivatives	3	12
Application of Differentiation	1	4
Integration	1	4

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

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planned	60	--	--	--	--	60

	Actual	60	--	--	--	--	60
Credit	Planned	60	--	--	--	--	60
	Actual	60	--	--	--	--	60

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

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Learning the trigonometric functions and their properties.	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.2	Identifying elimination and substitution methods to solve linear and nonlinear systems	Discussing some example and using graphs	Continuous feedback, quizzes, and oral question
1.3	Identifying the matrices with their properties.	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.4	Identifying limits and continuity with their applications.	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.5	Learning rules of differentiation.	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
1.6	Learning some of application of differentiation.	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question

1.7	Learning the basics rules of integration	Discussing problems, and using a graph	Continuous feedback, quizzes, and oral question
2.0	Cognitive Skills		
2.1	Contrasting different trigonometric functions and solving related problems	Solving problems	Quizzes, written exams
2.2	Finding the variables of the system of two equations	Graphing	Quizzes, written exams
2.3	Finding the determinant and inverse of matrices	Solving problems	Quizzes, written exams
2.4	Finding the limits at any point using graphs or other method.	Solving problems, graphing	Quizzes, written exams
2.5	Finding the first derivative and second derivative.	Solving problems	Quizzes, written exams
2.6	Finding the area under a function	Solving problems	Quizzes, written exams
3.0	Interpersonal Skills & Responsibility		
3.1	Develop certain teamwork responsibility activities.	Discussion	Evaluation of teamwork
4.0	Communication, Information Technology, Numerical		
4.1	Prepare and present certain topics during the semester, look out for certain issues in the course.	Presentation under supervision	Evaluation of Presentations
4.2	Use internet for further problems	assignments	Evaluation of assignments
5.0	Psychomotor		
5.1	N.A.		

5. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
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%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

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.

E Learning Resources

1. List Required Textbooks

Introduction to Math 2 compiled from Introduction to calculus by M. Zahri and College Algebra and Trigonometry by M. Lial and Calculus by R. Adams

2. List Essential References Materials (Journals, Reports, etc.)

- Rhonda Huettenmueller, Pre-calculus Demystified, McGraw Hill, 2012, 2nd edition

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

- www.khanacademy.org/math
- www.coolmath.com
- www.youtube.com
- www.wikipedia.com

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

Microsoft office, Adobe

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

- Classrooms with 20 chairs

2. Technology resources (AV, data show, Smart Board, software, etc.)

Data show, Smart boards, Microsoft office, Adobe

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

N.A.

G Course Evaluation and Improvement Processes

<p>1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching</p> <p>Continuous feedback, questioner</p>
<p>2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department</p> <ul style="list-style-type: none"> • Statistics of exams • Feedback by evaluation unit • External auditing
<p>3. Processes for Improvement of Teaching</p> <ul style="list-style-type: none"> • Make a revision for students • Giving extra lectures • Using online websites
<p>4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)</p> <ul style="list-style-type: none"> • Exams prepared by the coordinator of the course • Statistical processes for student's results • Recheck marking by another member of teaching staff for student exams.
<p>5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.</p> <p>Continuous revision and coordination with other collages.</p>

Name of Course Instructor: Mr. Mohammad S. Mustafa

Signature: Date Specification Completed: 1/10/2018

Program Coordinator:

Signature: Date Received:

