ATTACHMENT 2 (e)

Course Specifications

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

Course Specifications
(CS)

Introduction to Mathematics (2)

PMTH 127

Kingdom of Saudi Arabia
National Commission for
Academic Accreditation & Assessment

المملكــة العربيــة السعوديــة
الهيئــــة الوطنيــــة للتقــويــم
والاعـــتـمــاد الأكـــاديـمـــي

Course Specifications

Institution : Majmaah University	Date of Report 15/7/1435
College/Department Preparatory Year	

A. Course Identification and General Information

1. Course title and code: ,   PMTH 127

2. Credit hours   4 Hours
3. Program(s) in which the course is offered.   (If general elective available in many programs indicate this rather than list programs)   **Mathematics, level 2, which supports programs of the Faculty of Science, Faculty of Engineering, Faculty of Medicine and Faculty of Computer science.**
4. Name of faculty member responsible for the course   KAMAL NAZMI
5. Level/year at which this course is offered   First year – Level two
6. Pre-requisites for this course (if any)   PMTH 112
7. Co-requisites for this course (if any)
8. Location if not on main campus   Main Campus , Zulfi city

9. Mode of Instruction (mark all that apply)

a. Traditional classroom	■	What percentage?	90 %
b. Blended (traditional and online)	☐	What percentage?	
c. e-learning	☐	What percentage?	
d. Correspondence	☐	What percentage?	
f. Other	■	What percentage?	10%

Comments:

Kingdom of Saudi Arabia
National Commission for
Academic Accreditation & Assessment

المملكــة العربيــة السعوديــة
الهيئــة الوطنيــة للتقويــم
والاعــتمــاد الأكــاديــمــي

B Objectives

1. Summary of the main learning outcomes for students enrolled in the course.   The course aims at providing the student with the proper knowledge, cognitive skills, interpersonal skills, responsibility, communication skills, use of information technology skills and self – kinetics skills.
2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)   In order to improve this course, it is important to use different means of modern technology during lectures such as smart boards and data show projectors. It is also important to vary the sources of information (the course book, references, websites and the electronic library). This will be in line with the information revolution, which allows students to access the latest scientific research published in scientific journals and enables students to depend on themselves in the desired learning process.

C. Course Description (Note: General description in the form to be used for the Bulletin or handbook should be attached)

Topics to be cover

List of Topic	No. of Weeks	Contact hours				Total of contact	Self- Study				total
		Lecture	tutorials	Lab	Office Hours		Internet	Library	Homework	Discussions	
An introduction to Trigonometric Functions	2	8	4			12	1	1	2	1	17
Trigonometric Identities, Inverses, and Equations	3	12	6			18	2	1	3	1	25
Mid-term 1		2				2					2
System of equations and Inequalities	2	8	4			12	1	1	2	1	17
Matrices and Matrix Applications	2	8	4			12	1	1	2	1	17
Mid-term 2		2				2					2
Analytic Geometry and the conic section	3	12	6			18	2	1	1	1	13
Additional topics in algebra: Sequences and series &Mathematical Induction	2	8	4			12	1	1	2	1	17

Kingdom of Saudi Arabia
National Commission for
Academic Accreditation & Assessment

المملكــة العربيــة السعوديــة
الهيئــة الوطنيــة للتقــويــم
والاعـتـمـاد الأكـاديـمـــي

								2	2	**4**
Review								2	2	**4**
Final Exam		2			2					**2**
Total					90	8	6	14	8	**116**
		Note: one credit hour is equal 25 – 30 load work hour								

---

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

Credit	Contact Hours				Self-Study	Other	Total
	Lecture	Tutorial	Laboratory	Practical			
3	56	28			32		116

---

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

   4 Hours

---

2. 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	a) Convert between degrees and radians for nonstandard angles, find fixed ratios of the sides of the special triangles ,solve general applications of right triangle b) Use fundamental Identities to express a given trig function in terms of the other five and basic algebra skills. Derive and use the double-angle identities, solve applications using these identities c) To solve linear and nonlinear systems by substitution, elimination d) Solve systems using matrix equations, Find determinants and inverse of a square matrix e) Use the equations of circle ,ellipse ,hyperbola and parabola to sketch and locate the foci , center ,vertices f) Write out the terms of sequences and series, identify an arithmetic and geometric sequences. Find the nth terms of an arithmetic, apply mathematical inductions	**Start** each chapter by general idea and the benefit of it. **Demonstrate** the course information and principles through lectures.	Exams Midterms Final examination.
1.2	**Outline** the logical thinking.	**Provide** main ways to deal with the exercises.	Home work.
	State the physical problems by mathematical method.	**Solve** some examples during the lecture.	Continuous discussions with the students during the lectures.

Kingdom of Saudi Arabia
National Commission for
Academic Accreditation & Assessment

المملكــة العربيــة السعوديــة
الهيئـــة الوطنيـــة للتقـويــم
والاعـتـمــاد الأكــاديـمــي

2.0	**Cognitive Skills**		
2.1	The students will **explain and interpret** a general knowledge of Linear Algebra.	**Encourage** the student to look for some complicated problems in the different references.	Midterm exams Quizzes.
2.2	Enable students to **analyses** the mathematical problems.	**Ask** the student to attend lectures for practice solving problem.	Doing homework. Check the problems solution.
	Student's ability to **write** physical equations in a correct mathematical way.	Homework assignments.	Discussion of how to simplify or analyses some problems.
3.0	**Interpersonal Skills & Responsibility**		
3.1	The student should **illustrate** how take up responsibility.	Ask the students to search the internet and use the library. Encourage them how to attend lectures regularly by assigning marks for attendance.	Quizzes of some previous lectures. Ask the absent students about last lecture.
3.2	Must be **shown** the ability of working independently and with groups.	Teach them how to cover missed lectures. Give students tasks of duties	Discussion during the lecture.
4.0	**Communication, Information Technology, Numerical**		
4.1	The student should **illustrate** how to communicating with: Peers, Lecturers and Community.	Creating working groups with peers to collectively prepare: solving problems and search the internet for some topics.	Discussing a group work sheets.
4.2	The student should **interpret** how to Know the basic mathematical principles using the internet.	Give the students tasks to measure their: mathematical skills, computational analysis and problem solving.	Discuses with them the results of computations analysis and problem solutions.
	The student should **appraise** how to Use the computer skills and library.	Encourage the student to ask for help if needed.	Give homework's to know how the student understands the numerical

Kingdom of Saudi Arabia
National Commission for
Academic Accreditation & Assessment

المملكــة العربيــة السعوديــة
الهيئــــة الوطنيــة للتقـويــم
والاعــتــمــاد الأكـاديـمــــي

			skills.
	The student should **illustrate** how to Search the internet and using software programs to deal with problems.	Encourage the student to ask good question to help solve the problem.	Give them comments on some resulting numbers.
5.0	**Psychomotor**		
5.1	Not applicable	Not applicable	Not applicable
5.2	Not applicable	Not applicable	Not applicable

5. Schedule of Assessment Tasks for Students During the Semester

Assessment	Assessment task (eg. essay, test, group project, examination etc.)	Week due	Proportion of Final Assessment
1	Midterm 1	5th week	25 %
2	Midterm 1	10th week	25%
3	Homework + reports	During the semester	10%
4	Final exam	End of semester	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)

   1- 6-office hours per week in the lecturer schedule.
   2- The contact with students by e-mail , mobile, office telephone and website.

E. Learning Resources

1. Required Text(s)

JOHN W. COBURN: ALGEBRA TRIGONOMETRY , ACUSTOM PUBLICATION BY :

Mc Graw Hill Education, Second Edition 2010

2. Essential References

COLLEGE ALGEBRA & **TRIGONOMETRY** by Richard N. Aufmann - Houghton Miffin company – Boston , New York – 4th Edition

Kingdom of Saudi Arabia
National Commission for
Academic Accreditation & Assessment

المملكـة العربيــة السعوديــة
الهيئــة الوطنيــة للتقـويـم
والاعــتـمــاد الأكـاديـمــي

3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List):
Same as mention above.
4-.Electronic Materials, Web Sites etc
ALGEBRA & TRIGONOMETRY – 2nd edition: ROBERT BLITZER
5- Other learning material such as computer-based programs/CD, professional standards/regulations: None

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (ie number of seats in classrooms and laboratories, extent of computer access etc.)
1. Accommodation (Lecture rooms, laboratories, etc.)
-Classroom with capacity of 30-students.
- Library.
2. Computing resources: Not available
3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list): None

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching: Student evaluation electronically organized by the University.
2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department
The colleagues who teach the same course discuss together to evaluate their teaching.
3 Processes for Improvement of Teaching
- Course report, Program report and Program self-study.
- A tutorial lecture must be added to this course.
4. Processes for Verifying Standards of Student Achievement (eg. 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)

Kingdom of Saudi Arabia
National Commission for
Academic Accreditation & Assessment

المملكــة العربيــة السعوديــة
الهيئــــة الوطنيــــة للتقويــم
والاعــتــمــاد الأكــاديـمـــي

The instructors of the course are checking together and put a unique process of evaluation.

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

1-The following points may help to get the course effectiveness:

* Student evaluation.

* Course report.

* Program report.

* Program self-study.

2- According to point 1 the plan of improvement should be given

Faculty or Teaching Staff: **KAMAL NAZMI**

Signature: _____   **Date Report Completed:** _____

Received by: _____   **Dean/Department Head**

Signature: _____   **Date:** _____