ATTACHMENT 2 (e)

Course Specifications

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

Course Specifications
(CS)

Introduction to mathematics 1
PMTH 112

Course Specifications

Institution	Majmaah university	Date of Report	
College/Department	Mathematics Department - Faculty of science		

A. Course Identification and General Information

1. Course title and code: Introduction to Mathematics (1) PMTH 112
2. Credit hours 2 Hours
3. Program(s) in which the course is offered.
(If general elective available in many programs indicate this rather than list programs)
4. Name of faculty member responsible for the course
5. Level/year at which this course is offered First (Preparatory year)
6. Pre-requisites for this course (if any)
7. Co-requisites for this course (if any)
8. Location if not on main campus
9. Mode of Instruction (mark all that apply)

a. Traditional classroom		What percentage?	
b. Blended (traditional and online)	√	What percentage?	10
c. e-learning	√	What percentage?	40
d. Correspondence		What percentage?	
f. Other	√	What percentage?	50

Comments:

B Objectives

1. What is the main purpose for this course? The course aims to provide the students with an amount of knowledge, cognitive skills and interpersonal skills. Also, taking responsibility, communication skills and the use of information technology, along with psychomotor 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) To develop and improve the curriculum there is a use of the means of modern technology in teaching such as (the smart board and Data show) during the lecture. Diversify of the information sources (Allocated textbook, reference books and from specialized sites on the internet. in addition to the electronic library services). In abreast with the information technology revolution, which allows students to access the latest scientific researches published in scientific journals, which leads to students depending on themselves more in the learning process hoped for?

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

1 Topics to be Covered

List of Topics	No of Weeks	Contact hours
A review of basic Concept and skills	3	6
Equations and Inequalities	3	6
Relations, Functions and Graphs	3	6
Polynomials and Rational Functions	3	6
Exponential and Logarithmic Functions	3	6

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

Credit		Contact Hours				Self-Study	Other	**Total**
ECTS	**NCCCA**	Lecture	Tutorial	Laboratory	Practical			
3 cp	**2 ch**	**30**	**0**	**0**	**0**	**42**	**18**	**90 ch**

3. Additional private study/learning hours expected for students per week.	2-3 hours

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	able to **write** the number properties, algebraic expressions, graphs linear equation and quadratic equation	**Start** each Lecture by general idea and the benefit of it. **Demonstrate** the course information and principles through lectures.	Exams Midterms Final examination
1.2	able to recognize and define logarithmic functions and exponential functions, inverse functions, synthetic division and remainder theorem and linear equations, linear inequalities & absolute value equations and quadratic equations	**Provide** main ways to deal with the exercises	Continuous discussions with the students during the lectures
2.0	**Cognitive Skills**		
2.1	**Define and Recognize** the fundamental in basic mathematics such as: logarithmic functions and exponential functions, inverse functions, synthetic division and remainder theorem and linear equations, linear inequalities & absolute value equations and quadratic equations	**Encourage** the student to look for some complicated problems in the different references.	Midterm exams Quizzes.
2.2	**Outline** logical thinking.	**Ask** the student to attend lectures for practice solving problem.	Doing homework. Check the problems solution.

	Student's ability to **write** Mathematical 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 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	Discuses with them the results of computations analysis and problem solutions.

		solving.	
	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 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 task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Midterm 1	5th week	20%
2	Midterm 1	10th week	20%
3	Homework + reports	During the semester	20%
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- 10-office hours per week in the lecturer schedule.
2- The contact with students by e-mail and website.

E. Learning Resources

1. List Required Textbooks College Algebra and Trigonometry – Part 1
2. List Essential References Materials (Journals, Reports, etc.) Aufmann ,Barker and Nation "College Algebra and Trigonometry" Fifth Edition ,New York (2005) Edward B. Burger et al. "Algebra 1" New York (2007) Edward B. Burger et al. "Algebra 2" New York (2007)
3. List Recommended Textbooks and Reference Material (Journals, Reports, etc) College Algebra and Trigonometry – Part 1
4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)
5. Other learning material such as computer-based programs/CD, professional standards or regulations and software. - Sufficient number of computers . - Various Office programs on all computers. - Special programs for math symbols on all computers.

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.) There is an urgent need to coordinate with the Admission and Registration Deanship to make the course of (4 credit hours and 4 actual hours) instead of (2 credit hours and 3 actual hours) to give the students and the course their due right of teaching to cover various scientific topics properly. That the number of computers per lecture hall should be 15 – 20. Data show and their own remotes should be available. A smart board should be available in every hall with the need to give faculty members private workshops to deal with it
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) - Classrooms equipped with computers connected to the internet. - individual offices for each faculty member. - Sports halls for students. - A Cafeteria available for students and faculty members.
2. Computing resources (AV, data show, Smart Board, software, etc.)

Each hall should have between 15 - 20 computers in addition to a computer for the faculty member. Providing technical support for classrooms.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching - Developing of a questionnaire distributed among students to measure how well students accept the Textbook and take advantage of it at the end of the semester in an attempt of improvement. - Conducting discussions with students about the teaching method, strategies and taking into consideration their opinions. - Meeting with students individually.
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor - Discuss results periodically with the other course teachers. - Recording suggestions of colleagues continuously to improve the course. Discussion of the problems and there solutions with the faculty bored.
3 Processes for Improvement of Teaching Preparation workshops for faculty members in cooperation with the different departments, councils and the deanship.
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) Taking a sample of student's work to be reviewed by colleagues in the department. - Exchanges marking of tests with colleagues.

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. - Presenting the study plan on the board of the department and discussing developments at the end of each semester in an attempt to avoid the disadvantages and increase the advantages. - Recording suggestions of colleagues continuously to improve the course. - Revision of the course at the end of semester, to provide or change some of the examples and questions. - Establishing a questionnaire distributed among the students about the development of that course and getting suggestions for improving and developing.

Faculty or Teaching Staff: _____

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

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

Signature: _____ **Date:** _____

Workload with respect to 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	
A review of basic Concept and skills	3	3	3		**2**	8	2	2	3	3	**18**
Equations and Inequalities	3	3	3		2	8	2	2	2	2	**16**
Mid-term 1						1					**1**
Relations, Functions and Graphs	3	3	3		2	8	2	2	2	2	**16**
Polynomials and Rational Functions	3	3	3		2	8	2	2	2	2	**16**
Mid-term 2						1					**1**
Exponential and Logarithmic Functions	3	3	3		2	**8**	2	2	2	2	**16**
Review						**4**					**4**
Final Exam						2					**2**
Total	15	15	15		10	48	10	10	11	11	**90**

Note: one credit hour is equal 25 – 30 load work hour