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Attachment 2 (e)  
Course Specifications

Kingdom of Saudi Arabia  
The National Commission for Academic Accreditation & Assessment

***T6. Course Specifications***



## Course Specifications

Institution: Hail University

Date: 08/12/2016

College/Department: Preparatory Year, Basic Science Department, Mathematics

### A. Course Identification and General Information

1. Course title and code: Preparatory Mathematics-Level 3 PMAT 003

2. Credit hours: 2 hours

3. Program(s) in which the course is offered: Preparatory Year, Basic Science Department, Mathematics.  
(If it is a general elective that is available in many programs, indicate this rather than listing the programs.)

4. Name of faculty member responsible for the course: Mr.Aijaz Ahammed

5. Level/year at which this course is offered: Second semester of the academic year 2015-2016

6. Pre-requisites for this course (if any): Completed PMAT - 002 (Level-2)

7. Co-requisites for this course (if any):

8. Location if not on main campus: Male: Baqa campus, Building-6, Female:Aja Campus.

9. Mode of Instruction (tick (✓) the appropriate box):

a. Traditional classroom

What percentage?

100%

b. Blended (traditional and online)

What percentage?

c. E-learning

What percentage?

d. Correspondence

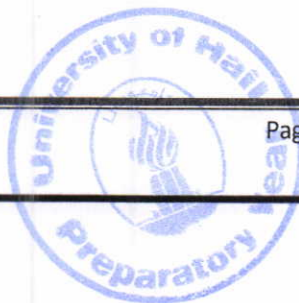
What percentage?

f. Other

What percentage?

Comments:

### B. Objectives





1. What is the main purpose for this course?

Recognize some fundamental functions and their specifications: Linear, Quadratic, Polynomial, Rational, Exponential, Logarithmic

- Define the Domains and Ranges of the basic functions,
  - to perform operations (addition, subtraction, multiplication, division and composition) on functions
  - to sketch and recognize graphs of the basic functions
  - to analyze the functions graphs and transformations
  - To solve basic Exponential and Logarithmic equations.
- A. Be able to continue the next higher level Mathematics involving algebra and basic functions
- B. Demonstrate analysis, critical thinking, with the goal to develop a realistic plan to improve the student's own behaviors
- C. Be with increased understanding of Applications of mathematical knowledge and ability to apply in different life situations (Application problems)

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)

- A. Teachers' development seminars
- B. Good planned Class room visits and discussions with teachers;
- C. Using Black board system;
- D. Self development

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

Course Description:

PMAT 003 is a theoretical course designed to give in-depth fundamental knowledge of functions and prepare the students for university courses. The course discusses different kinds of functions: Linear, Quadratic, Polynomial, Exponential, Rational, Logarithmic, their Domains and Ranges, performing operations (addition, subtraction, multiplication, division and composition) and analyzing the functions graphs and transformations. This course also teaches how to get useful information from graphs and distinguish between different types graphs and functions. The course includes Solving of Basic exponential and Logarithmic equations

#### 1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
Functions	1	2
Graphing Functions		2
Transformations of Functions	1	2
The Algebra and Composition of Functions		2
Inverse Functions	1	2
Analyzing the graph of a Function		2

