



## Course specification

University/Academy: Damanhour University

Faculty/Institute: Science

Department: Mathematics

### 1. course Data:

Course code: Math102	Course title: Mathematics (2) (Pure Math)(Algebra &Analytic geometry)	Academic year/level: 2007-2008 First year - Second term
Specialization: جميع التخصصات لمجموعة العلوم الرياضية والفيزيائية	No. of instructional units: lecture <input type="text" value="4"/> tutorial <input type="text" value="4"/> practical <input type="text" value="-"/>	

### 2. course Aim

Demonstrate theoretical knowledge and have practical skills that will be required for mathematical applications in different areas of science.  
Have an opportunity to put theory into practice via work-based learning

### 3. Intended learning outcome

#### a) Knowledge and understanding

- a1. Describe the nature and operations of algebra and analytic geometry.
- a2. List theories and concepts used in algebra and analytic geometry.
- a3. Identify the steps required to solve some real problems utilizing advanced algebra and analytic geometry.

#### b) Intellectual skills

- b1. Apply appropriate theories, principles and concepts relevant to algebra and analytic geometry.
- b2. Demonstrate a reasoned argument to the solution of familiar and unfamiliar problems relevant to algebra and analytic geometry.



<b>c) Professional skills</b>	c1. Plan practical activities using techniques and procedures appropriate learned during the course integration
<b>d) General skills</b>	d1. Use appropriate effective written and oral communication skills relevant to Algebra and analytic geometry.  d2. Work effectively as part of a group, involving leadership, group dynamics and interpersonal skills such as listening, negotiation and persuasion relevant to algebra and analytic geometry.  d3. Set tasks and solve problems relevant to algebra and analytic geometry using ideas and techniques some of which are at the forefront of the discipline.
<b>4. course content</b>	<ul style="list-style-type: none"><li>1- Functions of several variables:</li><li>2- Mathematical induction</li><li>3- Determinants of order (n)</li><li>4- Complex numbers</li><li>5- Polynomials</li><li>6- Theory of equations</li><li>7- Partial fractions</li><li>8- Polar coordinates</li><li>9- Pair of lines</li><li>10- The circle</li><li>11- System of circles</li><li>12- The Parabola</li><li>13- The ellipse.</li><li>14- The Hyperbola</li><li>15- General equation of Second degree in two variables</li></ul>



<b>5. Teaching and learning methods</b>	5.1 Lectures. 5.2 Tutorials 5.3 Homework 5.4 Oral discussion
<b>6. teaching and learning methods for students with special needs</b>	Non
<b>7. Student Assessment</b>	
<b>a. Procedures used:</b>	Mid term Final exam
<b>b. Schedule:</b>	Assessment 1 Midterm Exam Week 8 Assessment 2 Final exam Week 15
<b>c. Weighing of Assessment:</b>	Test1 50 Marks Final exam 200 Marks
<b>8. List of Textbooks and References:</b>	
<b>a. Course Notes</b>	Course notes provided by the staff member of Math department, to be handed at the beginning of the semester.
<b>b. Required Books (Textbooks)</b>	None
<b>c. Recommended Books</b>	None
<b>d. Periodicals, web sites,...,etc</b>	None

**Course Instructor:** Prof. Dr. Mohamed Darwish

Dr. Ragab Omar Abd El-Rahman

**Head of Department:** Dr. Ragab Omar Abd El-Rahman

**Date:** / /