



## Course specification

University/Academy: Damanhour University

Faculty/Institute: Science

Department: Mathematics

### 1. course Data:

<b>Course code:</b> Math207	<b>Course title:</b> Pure Mathematics (Analysis-Matrices & solid Geometry)	<b>Academic year/level:</b> 2008/2009 Second year - First term
<b>Specialization:</b> جميع التخصصات لمجموعة العلوم البيولوجية	<b>No. of instructional units:</b> lecture <input type="text" value="3hr"/> tutorial <input type="text" value="1hr"/> practical <input type="text" value="-"/>	

### 2. course Aim

Demonstrate theoretical knowledge and have practical skills in some topics of pure mathematicst (see contents).  
Have an opportunity to put theory into practice via work-based learning by application that related to mathematical biology.

### 3. Intended learning outcome

<b>a) Knowledge and understanding</b>	a1. Mention theories and concepts used in the mathematical biology. a2. Identify the steps required to carry out a piece of biology application on a topic within mathematics.
<b>b) Intellectual skills</b>	b1. Apply appropriate theories, principles and concepts relevant to the considered topics. b2. Critically assess and evaluate the literature within calculus problems relevant to these topics of mathematics.
<b>c) Professional skills</b>	c1. Plan and design practical activities using techniques and procedures appropriate to contents of this course of mathematic. c2. Design a piece of independent application using mathematics techniques.
<b>d) General skills</b>	d1. Develop appropriate effective written and oral communication skills relevant to Mathematical Biology d2. Demonstrate the ability to work effectively as part of a group relevant to Mathematical Biology.



	<b>d3.</b> Solve problems relevant to Mathematical Biology using ideas and techniques some of which are at the forefront of the discipline;
<b>4. course content</b>	1-Double integration
	2- Triple integration
	3-Change of variables
	4-Series and power series
	5-Summable series.
	6-Applications
	7-Ordinary differential equations of first order
	8- Second order with constant coefficients
	9-Applications
	10-Theory of matrices
	11- Application of matrices
	12- Planes and straight lines
	13 - Spheres, cylinders
	14-cones
<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</b>	Mid term Final exam



<b>used:</b>	
<b>b) Schedule:</b>	Assessment 1 Midterm Exam Week 7 Assessment 2 Final exam Week 15
<b>c) Weighing of Assessment:</b>	Class tests 50 Marks Final exam 100 Marks
<b>List of Textbooks and References:</b>	
<b>d) Course Notes</b>	Course notes provided by the staff member of Math department, to be handed at the beginning of the semester.
<b>e) Required Books (Textbooks)</b>	J. C. Burkill and H. Burkill, A course in mathematical analysis, Cambridge Mathematical Library, 1998.
<b>f) Recommended Books</b>	None
<b>g) Periodicals, web sites,...,etc</b>	None

**Course Instructor:** Dr. Ragab Omar Abd El-Rahman

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

**Date:** / /