



Course specification

University/Academy: Damanhour University

Faculty/Institute: Science

Department: Mathematics

1. course Data:

Course code: Math201	Course title: Pure Mathematics (Mathematical Analysis & Solid Geometry)	Academic year/level: 2008-2009 Second year - First term
Specialization: جميع التخصصات لمجموعة العلوم الرياضية والفيزيائية	No. of instructional units: lecture <input type="text" value="5"/> tutorial <input type="text" value="4"/> practical <input type="text" value="-"/>	

2. course Aim

This course is designed to encourage in students a sense of interest for mathematics, an appreciation of its application in different contexts and to involve them in an intellectually stimulating and satisfying experience of learning and studying. Provide a solid foundation in the major areas of mathematical analysis and solid geometry. Provide education and training of high quality in mathematics.

3. Intended learning outcome

a) Knowledge and understanding	a1. Define the nature and operations of functions of several variables.; a2. Demonstrate familiarity with theories and concepts used in the Linear algebra and statistics a3. Identify the steps required to carry out a piece of research on a topic within Linear algebra and statistics
b) Intellectual skills	b1. Recognize and apply appropriate theories,



	<p>principles and concepts relevant to Linear algebra and statistics</p> <p>b2. Assess and evaluate the literature within Linear algebra and statistics.</p> <p>b3. Analyze and interpret information from a variety of sources relevant to Linear algebra and statistics.</p> <p>b4. Exercise appropriate judgment in selecting and presenting information using various methods relevant to Linear algebra and statistics.</p>
<p>c) Professional skills</p>	<p>c1. Plan practical activities using techniques and procedures appropriate to Linear algebra and statistics</p> <p>c2. Plan, design, record, execute and communicate a piece of independent research using mathematics media and techniques.</p> <p>c3. Respond to change within the external and internal mathematic environments.</p>
<p>d) General skills</p>	<p>d1. Use organization skills (including task and time management) relevant to mathematics both individually and in a group situation</p> <p>d2. Demonstrate the ability to work effectively as part of a group, involving leadership, group dynamics and interpersonal skills such as listening, negotiation and persuasion relevant to Linear algebra and statistics.</p>
<p>4. course content</p>	<p>Functions of several variables</p> <p>Multiple integration</p> <p>Line and surface integrals.</p>



	Series, tests of convergence and uniform convergence
	Improper integrals .
	Fourier series.
	Ordinary differential equations of first order with constant coefficients.
	Ordinary differential equations of second order with constant coefficient
	Planes in space
	straight lines in space
	Quadratic surfaces.
	General equation of the second degree in three variables.
5. Teaching and learning methods	5.1 Lectures. 5.2 Tutorials 5.3 Homework 5.4 Oral discussion
6. teaching and learning methods for students with special needs	Non
7. Student Assessment	
a) Procedures used:	Mid term Final exam
b) Schedule:	Assessment 1 Midterm Exam Week 7 Assessment 2 Final exam Week 15
c) Weighing of Assessment:	Class tests 50 Marks Final exam 250 Marks
List of Textbooks and References:	



d) Course Notes	Course notes provided by the staff member of Math department, to be handed at the beginning of the semester.
e) Required Books (Textbooks)	Strang, Linear Algebra
f) Recommended Books	A. Ruina and R. Pratap, Introduction to statics and dynamics, Oxford University Press 1994. C. E. Whitherbuen, Advanced vector analysis, Bell's mathematical series, 1949
g) Periodicals, web sites,...,etc	None

Course Instructor: Prof. Dr. Mohamed Darwish

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

Date: / /