



Course specification

University/Academy: Damanhour University

Faculty/Institute: Science

Department: Mathematics

1. course Data:

Course code: Math101	Course title: Pure Math. (Math. Analysis)	Academic year/level: 2007-2008 First year - First 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 in the field of differential and integral calculus, have practical skills and encourage students to think well mathematically. Training to use the theoretical materials in practice to solve different problems. Putting theory into practice via work-based learning.

3. Intended learning outcome

a) Knowledge and understanding	a1. Describe the main concepts, definitions, and operations of calculus. a2. Mention theories and concepts used in calculus. a3. Identify an understanding of the contribution and impacts of calculus
b) Intellectual skills	b1. Apply appropriate theories, principles and concepts relevant to calculus. b2. Critically assess and evaluate the literature within calculus. b3. Apply a reasoned argument to the solution



	of problems relevant to calculus
c) Professional skills	c1. Plan, design and execute practical activities using techniques and procedures appropriate to differentiation and integration
d) General skills	d1. Develop appropriate effective written and oral communication skills relevant to calculus. d2. Demonstrate the ability to work effectively as part of a group d3. Solve problems relevant to calculus using ideas and techniques some of which are at the forefront of the discipline
4. course content	1-Functions of one variables
	2-Sequence , limits, continuity and derivatives
	3- Differentiation of algebraic and transdental functions,
	4-Theorems of differentiation
	5- Taylor`s and Maclurian`s expansions.
	6-Leibintez`s theorem
	7- The Indefinite integral and basic formulas,
	8- The definite integrals and theorems of integration...
	Methods of integration)
	9-Supstitution method .
	10- Integration by partial fractions
	11-Integration by parts
	12-Integration by recurrence relations
	(Applications of iteration)
13-Areas,volumes and length of curves.	
14- Volume of revolution and Surface of	



	revolution
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 8 Assessment 2 Final exam Week 15
c) Weighing of Assessment:	Class tests 50 Marks (20%) Final exam 200 Marks (80%)
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)	James Stewart, Calculus, Amazon, 1999.
f) Recommended Books	None
g) Periodicals, web sites,...,etc	None

Course Instructor: Prof. Dr. Mohamed Darwish

Dr. Ragab Omar Abd El-Rahman

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

Date: -----/-----/-----