



Course specification

University/Academy: Damanhour University

Faculty/Institute: Science

Department: Mathematics

1. course Data:

Course code: Stat 355	Course title: Pure Mathematics and statistics	Academic year/level: 2009-2010 Third year - First term
Specialization: النبات -الميكروبيولوجيا -علم الحيوان -الكيمياء الحيوية- الفيزياء والكيمياء - الكيمياء والنبات - الكيمياء والميكروبيولوجيا - الكيمياء والحيوان - الكيمياء والكيمياء الحيوية	No. of instructional units: lecture <input type="text" value="3"/> tutorial <input type="text" value="2"/>	

2. course Aim

Demonstrate theoretical knowledge and have practical skills and personal attributes in the subject of Statistics. Demonstrate an ability to initiate and sustain in-depth research relevant to statistical methods. Have an opportunity to put theory into practice via work-based learning.

3. Intended learning outcome

a) Knowledge and understanding	a1. Define familiarity with theories and concepts used in the statistics. a2. Recognize the structure and organization of the public and private sectors of the statistics. a3. Identify the steps required to carry out a piece of research on a topic within statistics. a4. Describe the contribution and impacts of the statistics in social, economic, environmental, political and cultural terms.
b) Intellectual skills	b1. Apply appropriate theories, principles and concepts relevant to the statistics.



	<p>b2. Critically assess and evaluate the literature within statistics.</p> <p>b3. Demonstrate a reasoned argument to the solution of familiar and unfamiliar problems relevant to statistics.</p>
<p>c) Professional skills</p>	<p>c1. Plan, design and execute practical activities using techniques and procedures appropriate to statistics.</p> <p>c2. Plan, design, record, execute and communicate a piece of independent research using statistics media and techniques.</p> <p>c3. Recognize moral, ethical and safety issues which are pertinent to statistics.</p>
<p>d) General skills</p>	<p>d1. Deal with an appropriate effective data relevant to statistics.</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 statistics.</p> <p>d3. Use organization skills (including task and time management) relevant to statistics both individually and in a group situation.</p> <p>d4. Solve problems relevant to statistics using ideas and techniques some of which are at the forefront of the discipline.</p> <p>d5. Acquire the ability to self appraise and reflect on practice relevant to statistics.</p>
<p>4. course content</p>	<p>1-Organizing and summarizing of data.</p> <p>2-Measures of central tendency and dispersion.</p> <p>3-Basic concepts and rules of probability.</p> <p>4-Conditional probability and independence.</p> <p>5-Bayes theorem.</p> <p>6-Random variables</p>



	7-Some probability distributions (Binomial, Poisson and Normal).
	8-Sampling and Sampling distributions χ^2 , t and F distributions.
	9-Confidence intervals for means and differences between means.
	10-Testing a statistical hypothesis
	11-Tests concerning population means and variances (large and small samples).
	12-Simple linear regression and correlation.
	13-Analysis of variance (One way & Two ways NOVA).
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	None
7. Student Assessment	
a) Procedures used:	Final exam
b) Schedule:	Assessment 1 Final exam Week 15
c) Weighing of Assessment:	Final exam 100 Marks (100%)
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)	Steel Robert G.D. & J.H.Torrie(1980) "Principles and procedures of Statistics" second edition, McGraw Hill, New York.
f) Recommended Books	None
g) Periodicals, web sites,...,etc	None

Course Instructor: Prof. Dr. Mohamed Albdla Darwish

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

Date: / /