

COURSE CLASSIFICATION FORM

Course Number/Name		STAT 212 Statistics and probability (1)	
Prepared by		Dr. Mohammed Elshahat Elsaadani	
Program Learning Outcomes	Levels* (0,1,2, 3,4,5)	Relevant Activities	Assessment Methods/Metrics
a1. Apply fundamentals and concepts of mathematics.	5	- Lectures - assignments	• 3 Midterm and final exam • Home work
a2. Apply fundamentals and concepts General sciences and Computer skills.	4	- assignments on logic statements	• 1 Midterm and final exam • Home work
a3. Realize Social and ethical values	3	Oral discussion	• Discussion
b1. Read and construct mathematical arguments and proofs.	4	- Lectures - assignments	Home work
b2. Apply critical thinking skills to solve problems that can be modeled mathematically.	4	- Lectures - assignments - Oral discussion	• 3 Midterm and final exam+ Home work
c1. Work independently and within a team	5	Divided students into groups and using oral discussion with homework	• Home work
c2. Bear responsibility for different situations.	2		• Quizzes
c3. Realize codes of ethics and their importance.	4	- assignments on information data and	
d1. Communicate a depth and breadth of mathematical knowledge, both orally and in writing.	4	- Lectures - assignments - Oral discussion	• 3 Midterm + final exam • Home work • Quizzes
d2. Ability to Organize, connect and communicate mathematical and algorithmic ideas.	4	- Lectures - assignments	• Home work • Quizzes
d3. Critically interpret numerical and graphical data.	5	- assignments on information data and represented data	• Home work • Quizzes
e1. Use computer and its applications as an office tool	2	- assignments on Logical expression	Home work Quizzes

* Please mark (or type) High (5), Medium-High (4), Medium (3), Low-Medium (2), Low (1) or Not At All (0) indicating the level to which you believe, as an instructor, the students have achieved these outcomes in this course.

Course Objectives and Outcomes

Course Number: STAT212 **Course Name:** Statistics and probability (1)

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Table 1: Relationship of course objectives/outcomes with PLO and ASIIN Criteria

Course Objectives:	Course Outcomes:	ASIIN	PLO
1. This course is designed to follow on from, and reinforce, A level mathematics.	1. Solve open-ended problems, cope with decision making and satisfy competing objectives	c	c
	2. Know how a team can use the Statistical Inference process to carry out a project.	c, e	c, e
	3. Apply knowledge, as needed, to design a satisfactory system to achieve a final successful project.	c	c
2. present students with a wide range of mathematics ideas in preparation for more demanding material later.	1. Prepare a needs-assessment and define a deliverable for a project.	c, e	c, e
	2. Synthesize information that the team gathers to solve open-ended problems.	e	e
	3. Conceptualize alternative concepts, evaluate alternatives, select preferred alternative, and implement the preferred project	c, e	c, e
3. Enable students to apply Mathematical tools/ techniques to product project	1. Use and integrate the fundamentals studied previously towards the goal of analyzing and designing project to achieve	a, c	a, c
	2. Able to develop and use appropriate analytical models	a k	a k
	3. Use appropriate software for project, modeling, and analysis		
4. Broaden skills in team work, critical thinking, communication, planning and scheduling through design project	1. Learn successful group interaction for a project	d, g	d, g
	2. Produce final design report as part of their deliverable	g	g
	3. Deliver a final oral presentation for their project.	g	g
5. Enable students to consider safety, ethical, legal, and other societal constraints in execution of their design projects	1. Understand environmental and legal issues	h	h
	2. Understand the importance of professional and ethical	f	f
	3. Understand the impact of aesthetic and human aspects	h	h
	4. Select from standard tables and catalogues machine elements, components and materials given appropriate performance requirements	c	c

Course Objectives and Outcomes

Table 2: Methods of assessment of course syllabus

Assessment Method	Number/Type				Instructor Assessed	TA/Grader Assessed	Peer/Self Assessed
Homework	5 homework assignments				x		
Mid Terms/Final Exams	2 mid-term; 1 final exam				x		
Quizzes	One biweekly				x		
Individual Projects	1-2 wks	3-4 wks	1/2 sem	Full sem			
Team Projects	1-2 wks	3-4 wks x	1/2 sem	Full sem x	x		x
Lab Assignments							
Computer Assignments							
Computer Tools Used							
Oral Presentations	one				x		x
Written Reports	one				x		
Other	Design project (project binder)				x		

Student Course Evaluation Form

The purpose of this evaluation is to collect instructor feedback for improving this course and the Mathematics program. Information will also be used for program accreditation purposes.

I. Program Learning Outcomes Evaluations

Course Number/Name	STA T 212 Statistics and probability (1)	Semester	Second 1434/1435					
Instructor	Dr. Mohammed El-Saadani							
Student Name	-----	Student ID	-----					
The course listed above is designed for students to achieve the following outcomes at a Not At All, Low, Low- Medium, Medium, Medium-High or High level.								
Please mark (or type) High (5), Medium-High (4), Medium (3), Low-Medium (2), Low (1) or Not At All (0) indicating the level to which you believe, as an instructor, the students have achieved these outcomes in this course.								
Program Learning Outcomes			5	4	3	2	1	0
a1. Apply fundamentals and concepts of mathematics.								
a2. Apply fundamentals and concepts General sciences and Computer skills.								
a3. Realize Social and ethical values.								
b1. Read and construct mathematical arguments and proofs.								
b2. Apply critical thinking skills to solve problems that can be modeled mathematically.								
c1. Work independently and within a team								
c2. Bear responsibility for different situations.								
c3. Realize codes of ethics and their importance.								
d1. Communicate a depth and breadth of mathematical knowledge, both orally and in writing.								
d2. Ability to Organize, connect and communicate mathematical and algorithmic ideas.								
d3. Critically interpret numerical and graphical data.								
e1. Use computer and its applications as an office tool								

Student Course Evaluation Form

II. Catalog Description , and Course Prerequisites Evaluations:

Based on your experiences in the course, please respond by circling the most appropriate number. Circle N/A for items that are not applicable, or if you have no opinion.

Catalog Description 1434-1435	<ul style="list-style-type: none"> • A range of topics are treated each at an elementary level to give a foundation of statistics, basic definitions, measures , theorems and computational techniques. • A rigorous approach is expected. • Elementary functions of a real variable. • Probability: Conditional probability, Bayes Theorem and independence. • Discrete random variables and distributions. • Expected value, variance and the weak law of large numbers. • Continuous random variables, particularly the Normal. 					
Course Prerequisites:	Math 2	Circle One (5=Strongly Agree; 1=Strongly disagree)				
2a. Do you believe that the catalog description (above) is accurate for this course?	5	4	3	2	1	N/A
2b. Do you believe that the course prerequisites (above) are appropriate for this course?	5	4	3	2	1	N/A
2c. If not, please list any prerequisites you believe are not appropriate for this course.						

III. Textbook(s) and/or Lab Manuals (if applicable) Evaluations:

Textbook(s) and/or Lab Manuals (if applicable):	<p>1- Probability & statistics for engineers & scientists. Ronald E. Walpole . . . [et al.]. Prentice Hall. 2012 — 9th ed.</p> <p>2- D.C. Montgomery & G. C. Runger. Applied Statistics and Probability. 3rd edition.2003.</p>						Circle One (5=Strongly Agree; 1=Strongly Disagree)					
3a. In general, do you believe this to be an appropriate textbook for this course?	5	4	3	2	1	N/A						
3b. Was the organization of the textbook appropriate for this course?	5	4	3	2	1	N/A						
3c. Was the level of the textbook appropriate for this course?	5	4	3	2	1	N/A						

IV. Computer usage (if applicable) Evaluations:

Computer usage (if applicable):							Circle One (5=Strongly Agree; 1=Strongly Disagree)					
4a. Was the use of computer well integrated with the course?	5	4	3	2	1	N/A						
4b. Was the computer lab adequately equipped with well-maintained and updated computers?	5	4	3	2	1	N/A						
4c. Was the computer lab equipped with sufficient number of computers?	5	5	5	2	1	N/A						
4d. Were the special software packages (MATLAB, SPSS, C+, FORTRAN, etc) available and accessible?	5	4	3	2	1	N/A						
4e. Was adequate technical support available when needed?	5	4	3	2	1	N/A						