Course Specification
(Bachelor)

Course Title:	An Introduction to Probability and Statistics
Course Code:	Stat 101
Program:	The track of scientific colleges
Department:	Department of Basic Sciences
College:	Common First Year
Institution:	King Saud University
Version:	For the Year 1446
Last Revision Date:	12/02/1446

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (.....)					
2. Course type					
A.	☐University	☒ College	☐Department	☒ Track	☐Others
B.	☐Required		☐Elective		
3. Level/year at which this course is offered: (.....)					
4. Course General Description:					
A course in applied mathematics aimed at giving the student some basic sciences in probability and statistics.					
5. Pre-requirements for this course (if any)**:**					
There is no.					
6. Co-requisites for this course (if any)**:**					
There is no.					
7. Course Main Objective(s):					
Preparing the student to address some of the statistical issues that he may encounter during his teaching career at the undergraduate level.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	**4**	**100%**
2	E-learning	**Two electronic home works**	
3	Hybrid • Traditional classroom • E-learning	4 **There is no**	**100%**
4	Distance learning	6	**Enrichment**

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	60
2.	Laboratory/Studio	There is no
3.	Field	There is no
4.	Tutorial	There is no
5.	Others (specify)	16
Total		76

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Graphical representation of data, numerical properties of data		Collaborative interaction and brainstorming	Home works and Exams
1.2	Probability space for a random experiment, probability of accidents, random variables.		Collaborative interaction and brainstorming	Home works and Exams
1.3	Confidence periods for natural and Bernoulli community milestones, testing hypotheses for natural and Bernoulli community milestones		Collaborative interaction and brainstorming	Home works and Exams
1.4	Graphical representation of data, numerical properties of data		Collaborative interaction and brainstorming	Home works and Exams
2.0	Skills			
2.1	Gain some skills in probability calculation		Collaborative interaction and brainstorming	Home works and Exams

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
2.2	Gain some skills in descriptive statistics		Collaborative interaction and brainstorming	Home works and Exams
2.3	Gain some skills in inferential statistics		Collaborative interaction and brainstorming	Home works and Exams
3.0	**Values, autonomy, and responsibility**			
3.1	Ability to process raw and scheduled data.		Collaborative interaction and brainstorming	Home works and Exams
3.2	Ability to calculate the probability of accidents related to randomized trials.		Collaborative interaction and brainstorming	Home works and Exams
3.3	Ability to calculate the parameters of the community and test hypotheses related to it.		Collaborative interaction and brainstorming	Home works and Exams
3.4	Ability to calculate simple correlation coefficient and regression analysis.		Collaborative interaction and brainstorming	Home works and Exams

C. Course Content

No	List of Topics	Contact Hours
1	Descriptive Statistics	20
2	Possibilities	20
3	Inferential Statistics	12
4	Correlation and regression	8
	Total	**60**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1	Two paper home works	5 and 10	8%
2	Two electronic home works.	6 and 12	7%

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
3	Participation	Continuous	10%
4	Mid Term Exam	10	25%
5	Final Exam	16	50%
6	Total	----------	100%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Introduction to Probability and Statistics, sixth Edition 2022
Supportive References	1-Nicholas, Jackie. Introduction to Descriptive Statistics. Mathematics Learning Centre, University of Sydney, 1990. 2-Samules, M.L., Witmer, J.A and Schaffner, A., Statistics for the Life Sciences. Fourth edition, Pearson, New York, 2012. 3-Walpole, R.E., Myers, R.H. and Myers, S.L. and Ye, K., Probability and Statistics for Engineers and Scientists, Ninth Edition, Prentice, New York, 2012.
Electronic Materials	The electronic file of the book on the Blackboard site.
Other Learning Materials	Statistical programs.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	- Classrooms equipped with electronic platform, smart board and projector for 30 students. -A computer lab equipped with technology and equipped with computers to accommodate 30 students per student.
Technology equipment (projector, smart board, software)	Computers equipped with statistical programs smart board.
Other equipment (depending on the nature of the specialty)	There is no.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Coordinator	Visits to classrooms during the semester.
Effectiveness of Students assessment	Trainers	Questionnaire
Quality of learning resources	Students	Questionnaire

Assessment Areas/Issues	Assessor	Assessment Methods
The extent to which CLOs have been achieved	**Evaluation and measurement coordinator**	**Analysis of the results**
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**Course Coordinator:** **Prof. Dr. Hamid Al-Oklah** **Signature:**  **Head of Department of Basic Sciences:** **Dr. Abdul Rahman Al-Zahrani** **Signature:** 
REFERENCE NO.	**1**
DATE	**14/2/1446H - 18/8/2024**