هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications

Course Title:	**Statistics**
Course Code:	**205 Stat**
Program:	**Biology**
Department:	**Mathematics**
College:	**Science**
Institution:	**Jazan University**

Table of Contents

A. Course Identification

1. Credit hours: 2 hours
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☑ Elective ☐
3. Level/year at which this course is offered: Level 3/Year 2
4. Pre-requisites for this course (if any)**:**
5. Co-requisites for this course (if any)**:**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	28	75%
2	**Blended**	9.5	25%
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	**25**
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	**25**

B. Course Objectives and Learning Outcomes

1. Course Description

This course is designed to provide students with

- Introduction to biostatistics
- Graphing representation of data
- Central and dispersion tendency
- Probability distribution
- Statistical estimation

2. Course Main Objective

After finishing the course, the student is expected to be familiar with the following:

- Describe and explain the raw statistical data
- Describe statistics measurements
- Familiar with inferential statistics and estimations

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Distinguishing statistical concepts relevant to descriptive statistics, representation of data, and comparison of variables	K1
1.2	Identify background, features and structure of measures of central tendency, probability distributions, sampling distribution and statistical inferences.	K2
1.3	Explain notations and concepts required for descriptive statistics, measures of central tendency, dispersion, probability distributions, sampling distribution, and parametric estimation.	K3
2	**Skills :**	
2.1	Apply theoretical, computational or practical aspect relevant to measures of central tendency and dispersion, probability distributions, sampling distribution, and parametric estimation.	S1
2.2	Compute solutions related to correlation coefficient, equation of regression line, discrete and continuous probability distributions, and confidence interval.	S2
2.3	Apply various statistical rules and techniques in analyzing data.	S3
2.4	Solve statistical and probability problems using critical thinking.	S4
3	**Values:**	
3.1	Cultivate a statistical attitude and nurture the interest.	V1
3.2	Leadership qualities and ability to cooperate in group problem solving.	V2
3.3	Inculcating values and ethics in thought towards the development of study habits essential for independent progress.	V3

C. Course Content

No	List of Topics	Contact Hours
1	Descriptive statistics	3
2	Graphical representation of data	2
3	Measures of central tendency	7.5
4	roabilityP	9.5
5	Statistical Estimation	4
Total		25

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Distinguishing statistical concepts relevant to descriptive statistics, representation of data, and comparison of variables	Lectures, Web based work, Classroom dissections.	Written exam (Problem solve, MCQ, true/false, Proof, Short answer), Quizzes, Assignments

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.2	Identify background, features and structure of measures of central tendency, probability distributions, sampling distribution and statistical inferences.	Lectures, Web based work, Classroom dissections.	Written exam (Problem solve, MCQ, true/false, Proof, Short answer), Quizzes, Assignments
1.3	Explain notations and concepts required for descriptive statistics, measures of central tendency, dispersion, probability distributions, sampling distribution, and parametric estimation.	Lectures, Web based work, Classroom dissections.	Written exam (Problem solve, MCQ, true/false, Proof, Short answer), Quizzes, Assignments
2.0	**Skills**		
2.1	Apply theoretical, computational or practical aspect relevant to measures of central tendency and dispersion, probability distributions, sampling distribution, and parametric estimation.	Lectures, problem solving, web based work, Classroom dissections.	Written exam (Problem solve, MCQ, true/false, Proof, Short answer), Quizzes, Assignments
2.2	Compute solutions related to correlation coefficient, equation of regression line, discrete and continuous probability distributions, and confidence interval.	Lectures, problem solving, web based work, Classroom dissections.	Written exam (Problem solve, MCQ, true/false, Proof, Short answer), Quizzes, Assignments
2.3	Apply various statistical rules and techniques in analyzing data.	Lectures, problem solving, web based work, Classroom dissections.	Written exam (Problem solve, MCQ, true/false, Proof, Short answer), Quizzes, Assignments
2.4	Solve statistical and probability problems using critical thinking.	Lectures, problem solving, web based work, Classroom dissections.	Written exam (Problem solve, MCQ, true/false, Proof, Short answer), Quizzes, Assignments
3.0	**Values**		
3.1	Cultivate a statistical attitude and nurture the interest.	Group work, problem solving, web based work	Assignments, presentations
3.2	Leadership qualities and ability to cooperate in group problem solving.	Group work, problem solving, web based work	Assignments, presentations
3.3	Inculcating values and ethics in thought towards the development of study habits essential for independent progress.	Group work, problem solving, web based work	Assignments, presentations

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Homework	3	5%
2	First exam.	6	20%
3	Second exam.	12	20%
4	Homework	14	5%

#	Assessment task*	Week Due	Percentage of Total Assessment Score
5	Final exam.	16	50%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :
Each group of students is assigned to a member of staff who will be available at office hours for help and academic guidance on daily basis.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Elementary Statistics a Step by Step Approach; Bluman, A. G., 6th Edition, McGraw- Hill, 2006.
Essential References Materials	1.Elementary statistics Picturing the world, R. Larson and B. Farber, 5th Edition, Pearson, 2012. 2. Introductory Biostatistics for the Health Sciences; Michael R. Chernick& Robert H. Friis, John Wiley & Sons, 2003. Inc. Publication, New Jersey USA.
Electronic Materials	Web sites dedicated to statistics available on the internet.
Other Learning Materials	Black board platform.

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classroom, Computer lab.
Technology Resources (AV, data show, Smart Board, software, etc.)	Data show; Smart Board, Blackboard platform, Excel, statistical software
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching	Students, Peer and program leader	Indirect (Course Evaluation Survey)- Indirect peer evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Assessment	Students, Program assessment committee	Direct/ Indirect
Extent of achievement of course learning outcomes	Instructor	Direct/Indirect
Quality of learning resources	Students, Faculty members	Indirect

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Board of Mathematics Department**
Reference No.	**….th Meeting Of The Board Of Mathematics Department 1441-1442**
Date	**27/02/1442 AH.; 13/11/2020 A. D.**