Course Specification
(Bachelor)

Course Title: Graduation Project (2)	
Course Code: STAT 498	
Program: Statistics	
Department: Statistics and Operations Research	
College: Science	
Institution: King Saud University	
Version: 3	
Last Revision Date: 22-09-2024	

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: 2(2+0+0)

2. Course type

A.	☐ University	☐ College	☒ Department	☐ Track	☐ Others
B.	☒ Required			☐ Elective	

3. Level/year at which this course is offered: (8th/4th)

4. Course general Description:

- Introduce the student to the fundamental steps of defining and refining a real-life problem.
- To familiarize students with the resources and previous research about the application under study.
- To familiarize students with data gathering and analysis for problem formulation.

5. Pre-requirements for this course (if any):

STAT 497

6. Co-requisites for this course (if any):

NA

7. Course Main Objective(s):

- Collect the data from various resources
- Self-leaning in how to come out with findings and conclusions
- Self-dependent in collecting the required data through personal efforts
- Write statistical reports

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	100
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	
5.	Others (specify)	30
Total		**30**

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

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Ability to define a real-life problem.	K5	Meetings with the advisor weekly to provide required guidance and to ensure that the previous knowledge is gained	Assessment of the examiner's standards using a rubric
1.2	Ability to decide the appropriate data to be collected for problem definition.	K3	Assigning tasks toward the achievement of the goal of study	Assessment of the examiner's standards using a rubric
2.0	**Skills**			
2.1	Ability to build mathematical models of real-life problems related to any field of statistics	S1	Adviser meetings	Assessment of the examiner's standards using a rubric
2.2	Ability to use appropriate mathematical techniques to solve and evaluate these models	S1	Additional readings	Assessment of the examiner's standards using a rubric
2.3	Acquire additional	S1	Problem solving	Assessment of

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
	mathematical models of real-life systems			the examiner's standards using a rubric
2.4	Ability to present mathematically supported recommendations	S3	Case studies of relevant real problems	Assessment of the examiner's standards using a rubric
2.5	Ability to write reports to describe the problem.	S3	Writing report	Assessment of the examiner's standards using a rubric
3.0	Values, autonomy, and responsibility			
3.1	Acquire self-learning, continuous development, and time management skills.	V2	Conducting group experiments and writing group reports	Assessment of the examiner's standards using a rubric
3.2	Apply standards of integrity, transparency, and ethical behavior to evaluate the validity and reliability of statistical analyses and draw meaningful conclusions.	V3	Solving problems in groups/recitation sessions	Assessment of the examiner's standards using a rubric
3.3	Communicate results of work to others	V2	Conducting group experiments and writing group reports	Assessment of the examiner's standards using a rubric

C. Course Content

No	List of Topics	Contact Hours
1.	Determine related resources	4
2.	Collect previous research	4
3.	Extensive reading about the application	6
4.	Defining the problem under study	4
5.	Research for appropriate mathematical model	4
6.	Gathering of required data	4

7.	Writing Project Proposal	4
Total		**30**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Writing of final research in scientific method	weekly	60
2.	Debates and questions	15th	20
3.	Evaluation of the presentation by a committee	15th	20

*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	Any book related to the topics of the project
Supportive References	Any book related to the topics of the project
Electronic Materials	Websites on the internet that are relevant to the topics of the project
Other Learning Materials	Computer software available at the departmental computer laboratories

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	computer lab
Technology equipment (projector, smart board, software)	R programming
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect
Effectiveness of Students assessment	Quality committee	Indirect
Quality of learning resources	Instructor	Direct
The extent to which CLOs have	Course coordinator	Direct

Assessment Areas/Issues	Assessor	Assessment Methods
been achieved		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	DEPARTMENT COUNCIL/ PLANS COMMITTEE / ACADEMIC ACCREDITATION COMMITTEE (BACHELOR)
REFERENCE NO.	
DATE	//13-12-2024