

## T6. Course Specification (CS)

Institution : Najran University.	Date: 4-5-1439
College/Department : Faculty of Science and Arts / Mathematical	

### A. Course Identification and General Information:

1. Course title and code : Principles of Statistics and Probability101STAT-3			
2. Credit hours : Three hours			
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs):  Program of Mathematics			
4. Name of faculty member responsible for the course:  Assoc. Prof. Sultan Ali Mohammed			
5. Level/year at which this course is offered : Level 5/ Third Year			
6. Pre-requisites for this course (if any): None			
7. Co-requisites for this course (if any) : None			
8. Location if not on main campus : College of Science and Arts- Najran-Male and Female College of Science and Arts- Sharoura-Male and Female			
9. Mode of Instruction (mark all that apply) :			
%100%			
a. Traditional classroom	<input type="text"/>	What percentage?	<input type="text"/>
b. Blended (traditional and online)	<input type="text" value="yes"/>	What percentage?	<input type="text" value="100%"/>
c. e-learning	<input type="text"/>	What percentage?	<input type="text"/>
d. Correspondence	<input type="text"/>	What percentage?	<input type="text"/>
f. Other	<input type="text"/>	What percentage?	<input type="text"/>
Comments :None			

## B. Objectives :

1. What is the main purpose for this course?
1. Find out the basic concepts related to the collection and tabulation of statistical data and calculate statistical measures its own.
2. Know the basic concepts related in probability.
3. Transfer student from the stage Description to the stage of decision-making on the basis of the results available to him.
4. Recruitment of statistical skills acquired by the student in solving problems.
2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)
1. Update the contents periodically.
2. Using new references.
3. Change in contents as a result of new according to the modern orientations.

## C. Course Description (Note: General description in the form used in the Bulletin or handbook should be attached).

<b>Course Description :</b> This course introduce: Importance of statistics, Presentation and description of statistical data, Measures of central tendency, Measures of dispersion, Variation coefficient, Measures of skewness, Kurtosis Measure, Correlation and regression, Introduction of probability and Introduction of estimation theory and testing hypothesis.		
1. Topics to be Covered:		
List of Topics	No. of Weeks	Contact Hours
Introduction(Importance of statistics, Definition of statistics, Statistical data, Sources of data, Methods of data collection, Population and sample, Parameter and statistic, Summation notation).	1	3
Presentation and description of statistical data(Frequency distributions, Relative frequency, Cumulative frequency distributions, Graphic Presentations, Forms of distributions, Introduction of samples).	1	3
Measures of central tendency(Arithmetic mean, Geometric mean, harmonic mean, Median, Mode, Approximate relation of the mean, median and mode, Deciles, quartiles and percentiles).	3	9
Measures of dispersion (Rang, Mid - quartile rang, Mean deviation, Variance, Standard deviation).	2	6
Variation coefficient, Quartile variation coefficient, Measures of skewness(Pearson an coefficient , Quartile skewness coefficient, Percentile skewness coefficient ),Kurtosis Measure(or Peakedness), Correlation and regression.	2	6

Introduction of probability(Probability and statistics, Meaning of probability, Basic definitions, Axioms of probability, Relationship between random events, Basic laws, Conditional probability, Independent events, Bayes rule, Bayes theorem, Combination and Permutation).	3	9
Introduction of estimation theory and testing hypothesis.	3	9

2.Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory or studio	Practical	Other:	Total
Contact Hours	45					45
Credit	3					3

3-Additional private study/learning hours expected for students per week	6
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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy.
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On the table below are the five NQF Learning Domains, numbered in the left column.

**First**, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table)

**Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes.

**Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain).

Code	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b> : By the end of the semester, the students will be able to		
1.1	Describe different ways of collecting data.	-Develop appropriate plan to guide students to reach their own knowledge and facilitate the way for them to do so. - Create an environment for effective learning and teaching. - Contributing to the increased opportunities for the involvement of students in the work. - Encourage students to research	-Assigning student homework solution. - Quarterly Tests. -A final test.
1.2	Define the data using tables and graphs		
1.3	Define measures of central tendency and dispersion measures.		
1.4	List the relationship between probability and statistics.		
1.5	Describe of linear regression		

Code	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
	and correlation between variables.	and exploration.	
1.6	Describe of the basic concepts in probability theory and the theory of estimation		
<b>2.0</b>	<b>Cognitive Skills</b> : By the end of the semester, the students will be able to		
2.1	Explain acquire the necessary skills to understand the statistical data in various fields.	Students discuss the topic of the lecture and encourage them to express their opinion on the subject before putting.  - Develop interview questions. - To allow students to ask questions and express their opinions and ideas.	- Quarterly Tests . - Tests of a sudden (undeclared) to evaluate subjects.
2.2	Prepare of students to the descriptive analysis of statistical data, and draw conclusions and recommendations		
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility :</b> By the end of the semester, the students will be able to		
3.1	Illustrate the student the opportunity to take responsibility in learning through a variety of tasks and activities assigned to.	Cooperative learning method	To discuss each student within the group and then discuss the group together.
3.2	Demonstrate students with the teamwork with peers in an atmosphere of cordiality and understanding with regard to semi-real situations.		
3.3	Demonstrate students to acquire social skills and appropriate communication through talk and express his opinion and respect his ideas and experiences.		
<b>4.0</b>	<b>Communication, Information Technology, Numerical :</b>		
4.1	Demonstrate research, analysis and information retrieval.	Not applicable	Not applicable
<b>5.0</b>	<b>Psychomotor :</b>		
5.1	Not applicable	Not applicable	Not applicable

5. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (e.g. essay, test, Quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	First exam	7	25 degrees
2	Second exam	12	25 degrees
3	Final exam	16	50 degrees

#### D. Student Academic Counseling and Support :

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week).  
Model is placed on the Office of the faculty member specifying the lectures and dates of office hours-  
Office Hours:
  - Office hours 3hr/ week.
  - Follow-up of the academic advisor.

#### E. Learning Resources :

1. List Required Textbooks :
  - د. عبد الله الشبيحة - د. عدنان بري, آخر طبعة , مبادئ الإحصاء والاحتمالات, دار النشر مكتبة الشقري.
2. List Essential References Materials (Journals, Reports, etc.):
  - أ.د محمد صبحي أبو صالح, أ. د عدنان عوض -2008م, مقدمة في الإحصاء (مبادئ وتحليل باستخدام SPSS) , الطبعة الثانية , دار الميسرة للنشر.
  - محمد صبحي أبو صالح وعدنان عوض (1983) – مقدمة في الإحصاء – نيويورك – ويلي.
3. List Electronic Materials Web Sites, Face book, Twitter, etc.
  - Electronic materials available on the internet.
  - Lectures on the Department of Mathematics YouTube Channel.
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.
  - Program SPSS

#### F. Facilities Required :

- Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.):
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.):
    - Classrooms number of seats = 40 seat
    - Computer rooms containing at most 30 PCs
    - Rooms equipped with modern teaching techniques and different display devices.
  2. Computing resources (AV, data show, Smart Board, software, etc.):
    - Halls equipped with modern learning techniques and different display devices.

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) :

None

#### G. Course Evaluation and Improvement Processes:

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching
- The distribution of questionnaires to the students at the end of the semester to get the special assessment to a course.
- Interview a sample of students enrolled in the course to take their views.
- Follow-up over the performance and interaction of students with the course through attendance and tests.
2. Other Strategies for Evaluation of Teaching by the Instructor or by the department.
- Qualitative analysis of the results of the students.
- Suggestions Fund-mail.
3. Processes for Improvement of Teaching:
- A self-assessment by Processor article.
- Ensure aids relating to a course.
- Upgrading the relationship between teacher and student to be a human relationship.
- Follow-up new teaching strategies..
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution):
- A special committee as determined by management college at the end of each semester.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement:
- Periodic meetings with outstanding students to learn the positive and negative aspects in a course.

**Name of instructor :** Assoc. Prof. Sultan Ali Mohammed

**Signature :** \_\_\_\_\_ **Date Report Completed:** 4/5/1439\_

**Name of field experience teaching staff :** \_\_\_\_\_

**Program coordinator : Dr. Hamood Al-Haddad**

**Signature:** \_\_\_\_\_ **Date received:** \_\_\_\_\_