**Daffodil International University**

**Faculty of Business and Entrepreneurship**

**BBA program**

**COURSE OUTLINE -Business Statistics**

# Part A- Introduction

1. **Course Code andTitle** : **STA-101Business Statistics**
2. **Credit** : 3 credit hours

## CourseSummary

Statistics is the science that deals with the collection, description, analysis, interpretation, and presentation of data. Statistics can be used to describe a particular data set (termed descriptive statistics) as well as to draw conclusions about the population from a particular data set (termed inferential statistics). ‘*Statistics in Business*’ applies statistical methods in business context in order to address business related questions and help make evidence-based decisions.

## CourseObjectives

The major objective of this course is to provide students with sound understanding of the theoretical and practical knowledge of statistics, thereby, enabling them to apply their statistical knowledge and skills throughout their future studies and careers.

## Course Learning Outcomes: at the end of the Course, the Student will be ableto-

|  |  |
| --- | --- |
| **CLO 1** | Understand the basic idea of the term ‘statistics’. |
| **CLO 2** | Learn how to collect data and describe data. |
| **CLO 3** | Evaluate the Measures of Central Tendency. |
| **CLO 4** | Understand the Measures of Dispersion in Frequency Distributions. |
| **CLO 5** | Understand the concept of “Correlation Analysis”. |
| **CLO 6** | Understand the concept of “Regression Analysis”. |

**Part B- Content of the Course**

* 1. **Topics to be covered/Content of thecourse-**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Topics** | **Specific Outcome(s)** | **Time****Frame** | **Suggested****Activities** | **Teaching****Strategy(s)** | **Alignment****withCLO** |
| **Overview of the course** | -To comprehend the mission and vision of theinstitution-To acquire general idea about the course -To grasp the content and policies for the class | Week 1 | * Students will give brief introduction about themselves
* Course outline will be

discussing in details* - “Necessity of statistics in real world” will be discussed.
 | -Give real life examples to motivate the students | \*developed interest of the students CLO 1\*express themselves while introducing themselves CLO1 |
| **Introduction to Statistics** | * -To describe why
* statistics is used
* -To know the
* differences between
* descriptive and inferential statistics
* -To understand the
* differences between a
* sample and a population
* -To explain the
* difference between
* qualitative and
* quantitative variables
* -To compare the
* differences between
* discrete and continuous
* variables
* -To recognize the
* levels of measurement
* in data
 | Week 2 | -Discussions and List of examples will be shared | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO 1 |
| **Describing Data: Frequency Distributions And Graphic Presentation** | * -To understand various types of data
* -To make a frequency
* table for a set of data.
* -To organize data
* into a bar chart.
* -To present a set of
* data using a pie chart
 | Week 3 | -Discussions and List of examples will be shared-Assignment | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO 2 |
| **Describing Data: Frequency Distribution And Graphic Presentation** | * -To create a frequency
* distribution for a data
* set
* -To understand a
* relative frequency
* distribution
* -To present data from
* a frequency distribution

in a histogram or a* frequency polygon
* -To construct and
* interpret a cumulative
* frequency distribution
 | Week 4 | -Discussions and List of examples will beshared* **Quiz 1 will be taken**
 | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO2 |
| **Measures of Central Tendency** | * -To explain the
* concept of central
* tendency.
* -To identify and
* compute the arithmetic
* mean under ungrouped data.
* -To compute and
* interpret the weighted
* mean.

-To compute the median under ungrouped data* -To compute the mode under ungrouped data
 | Week 5 | -Discussions and List of real life examples will beshared | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO 3 |
| **Measures of Central Tendency** | -To compute the mean under grouped data-To compute the median under grouped data-To compute the mode under grouped data-To compute Quartile, Decile and Percentile-To construct and describe astem-and-leaf display | Week 6 | -Interactive Discussions with List of real life examples**- Quiz 2 will be taken** | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO 3 |
| **Exam Review** | -To make an overview |  | Lectures, questions and answers |  |  |
| **MID-TERM****EXAMINATION** |  | Week 7 |  |  |  |
|  | Mid-term exam paper discussion and sharing mid-term marks | Week 8 |  |  |  |
| **Measures of Dispersion In Frequency Distributions** | * -To explain and apply measuresof dispersion.
* -To compute and explain
* the variance and the standarddeviation under grouped data and ungrouped data.
 | Week 8 | * -Interactive Discussions with List of real life examples

-Group Presentation topic will be given | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO 4 |
| **Measures of Dispersion In Frequency Distributions** | * -To compute and explain coefficient of variation
* -To compute and analyze coefficient of skewness under ungrouped data
* -To compute and analyze coefficient of skewness under grouped data
 | Week 9 | -Interactive Discussions with List of real life examples | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO 4 |
| **Correlation Analysis** | -To define “Correlation Analysis”-To draw scatter diagram- To understand the features of correlation coefficient | Week 10 | * -Discussion based on real life examples.
 | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO5 |
| **Correlation Analysis** | -To define the termsindependent variable and dependent variable-To calculate, andinterpret the relationshipbetween two variables using the correlation coefficient-To calculate coefficient of determination | Week 11 | -Discussion based on real life examples**- Quiz 3 will be taken** | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO 5 |
| **Regression Analysis** | * -To apply regression
* analysis to estimate the
* linear relationship betweentwo variables
* -To interpret the regression analysis
* -To evaluate a regressionequation to predict thedependent variable
 | Week 12 | * -Discussion based on real life examples
* -Group presentation will be taken
 | Lecture, Discussion, Problem based Exercise | Analyze the problemand answer the question CLO6 |
| **Exam Review** | -To make an overview |  | Lectures, questions and answers |  |  |
| **FINAL****EXAMINATION** |  | Week 13 |  |  |  |

**Part C- Assessment and Evaluation**

* 1. **ASSESSMENT PATTERN Quizzes:**

Altogether 3 quizzes may be taken during the semester, 2 quizzes will be taken for midterm and 1 quiz will be taken for final term. Average of all of the quizzes will be considered. No makeup quizzes will be taken. Students are strongly recommended not to miss any quizzes.

## Assignment:

The topic will be given as assignment during the class which each student has to prepare at home and will submit on or before the due date. No late submission of assignments will be accepted.

## Presentation:

The students will have to form a group of maximum 4 members. The topic will be given during the class which they have to prepare at home and will have to present in group in the due date.

##  CIE- Continuous Internal Evaluation (35 Marks)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Bloom’s Category** | **Quizzes** | **Assignments** | **Presentation**  | **Class attendance** |
| **Marks (out of 28)** | **(15)** | **(5)** | **(8)** | **(7)** |
|  |  |  |  |
| Remember |  |  |  |  |
| Understand |  5 | 3 | 3 |  |
| Apply | 4 |  |  |  |
| Analyze | 6 |  |  |  |
| Evaluate |  |  |  |  |
| Create |  | 2 | 5 |  |

 **SMEE- Semester Mid & End Examination (65 Marks)**

|  |  |
| --- | --- |
| **Bloom’s Category** |  **Test** |
| Remember | 8 |
| Understand | 15 |
| Apply | 18 |
| Analyze | 14 |
| Evaluate |  5 |
| Create |  5 |

* 1. **Assessment andEvaluation:**

Grades will be calculated as per the university grading structure and individual student will be evaluated based on the following criteria with respective weights.

|  |  |
| --- | --- |
| Class attendance | 7% |
| 3 Quizzes | 15% |
| Assignment | 5% |
| Presentation | 8% |
| Mid-term Test | 25% |
| Semester Final Exam | 40% |
| **Total** | **100%** |

# Part D-Learning Resources

## Textbook

* + 1. Statistical Techniques in Business & Economics (15th Edition); Wathen, S.A., Lind, D.A. and Marchal, W.G.

## Reference Books & Materials:

* + 1. Business Statistics- Groebner, Shannon, and Fry (10th Edition)
		2. Business Statistics – S. P Gupta, M. P Gupta
		3. David, R. Anderson, Dennis J. Sweeney and Thomas A. Williams, Statistics for Business and Economics (9th Edition)
		4. Statistics for Management- Richard I. Levin & David S. Rubin (Latest Edition)