| | | | | | |
|---|---|---|---|---|---|
| 1. | Name of Course : | Introduction to Statistics | | | |
| | Course Code : | STAT 1000 | | | |
| 2. | Synopsis : | The course introduces various elementary concepts of statistics such as descriptive statistics, probability distribution, sampling and estimation, hypothesis testing and simple linear regression | | | |
| 3. | Name of academic staff : | Nora'asikin binti Abu Bakar | | | |
| 4. | Semester and Year offered : | | 1 | Year | 2 |
| 5. | Credit Value : | 3 | | | |
| 6. | Prerequisite/co-requisite: (if any) | None | | | |

7. Course Learning Outcomes (CLO) : At the end of the course the students will be able to:

| | |
|---|---|
| CLO1 | Construct tabular, pictorial presentation and compute the measures of central tendency and dispersion. |
| CLO2 | Solve the probability and some special probability distribution problems. |
| CLO3 | Construct an interval estimation and carry out hypothesis testing for population mean, and do forecasting using simple linear regression. |

8. Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment :

| Course Learning Outcomes (CLO) | Programme Learning Outcomes (PLO) | | | | | | | | | | | | Teaching Methods | Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 | PLO6 | PLO7 | PLO8 | PLO9 | PLO10 | PLO11 | PLO12 | | |
| **CLO 1** | √ | | | | | | | | | | | | Lect & Tut | Asg, Test & FE |
| **CLO 2** | | | | √ | | | | | | | | | Lect & Tut | Test & FE |
| **CLO 3** | | | | | | √ | | | | | | | Lect & Tut | Test & FE |

*Indicate the relevancy between the CLO and PLO by ticking "/" the appropriate relevant box.*

*(This description must be read together with Standards 2.1.2 , 2.2.1 and 2.2.2 in Area 2 - pages 16 & 18)*

| | | | |
|---|---|---|---|
| 9. | Transferable Skills (if applicable)<br>(Skills learned in the course of study which can be useful and utilized in other settings) | **1** | Skills on solving statistical problems will be obtained from lectures, exercises and tutorials. |
| | | **2** | |

**10. Distribution of Student Learning Time (SLT)**

| Course Content Outline | CLO* | Teaching and Learning Activities | | | | | | SLT |
|---|---|---|---|---|---|---|---|---|
| | | Guided Learning (F2F) | | | | Guided Learning (NF2F) eg: e-Learning | Independent Learning (NF2F) | |
| | | L | T | P | O | | | |
| **1. Introduction to Statistics**<br>• The definition and its role in life<br>• Definition of terms | 1 | 2 | 2 | | | | 2 | 6 |
| **2. Graphical Descriptive Methods**<br>• Frequency distribution<br>• Pie charts and Bar charts<br>• Stem-and-leaf<br>• Histogram<br>• Polygon<br>• Ogive | 1 | 4 | 2 | | | 1 | 8 | 15 |
| **3. Numerical Descriptive Measure**<br>• Measures of Central Tendency<br>• Measure of Dispersion | 1 | 4 | 2 | | | 1 | 8 | 15 |
| **4. Probability**<br>• Sample Spaces and Event<br>• Properties of Probability<br>• Conditional Probability<br>• Bayes Rules | 2 | 3 | 2 | | | | 8 | 13 |
| **5. Probability Distribution**<br>• Random Variables and Probability Distribution<br>• Binomial distribution<br>• Poisson distribution<br>• Normal distribution | 2 | 3 | 2 | | | 1 | 8 | 14 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **6. Sampling and Estimation**<br>• Sampling distribution of the sample mean<br>• Interval estimation of population mean | 3 | 3 | 2 | | | 1 | 6 | 12 |
| **7. Hypothesis Testing**<br>• Introduction<br>• Testing the single population mean | 3 | 3 | 2 | | | 1 | 6 | 12 |
| **8. Simple Linear Regression**<br>• Introduction<br>• Least Square Method<br>• Correlation | 3 | 2 | 2 | | | | 2 | 6 |
| | | | | | | | **Total** | 93 |

| | Continuous Assessment | | Percentage (%) | F2F | NF2F | SLT |
|---|---|---|---|---|---|---|
| | 1 | Assignments | 30 | 2 | 6 | 8 |
| | 2 | Tests | 20 | 2 | 4 | 6 |
| | | | | | **Total** | 14 |
| | **Final Assessment** | | **Percentage (%)** | **F2F** | **NF2F** | **SLT** |
| | 1 | Final Exam | 50 | 3 | 10 | 13 |
| | | | | | **Total** | 13 |

****Please tick (√) if this course is Latihan Industri/ Clinical Placement/ Practicum/ WBL using 2-weeks, 1 credit formula**

**GRAND TOTAL SLT** **120**

*L = Lecture, T = Tutorial, P= Practical, O= Others, F2F=Face to Face, NF2F=Non Face to Face*

**Indicate the CLO based on the CLO's numbering in Item 8.*

| | | | |
|---|---|---|---|
| 11 | Identify special requirement to deliver the course (e.g: software, nursery, computer lab, simulation room, etc) | | |
| 12 | References : (include required and further readings, and should be the most current) | Main reference supporting the course:<br>Ron Larson, Betsy Farber. 2018. *Elementary Statistics: Picturing the World, 7th Ed* . Pearson | |
| 13 | Other additional information : | Additional references supporting the course:<br>1. Bluman. 2018. *Elementary Statistics, 10th Ed* . Mc Graw Hill<br>2. Mario F. Triola. 2017. *Elementary Statistics, 13th Ed* . Pearson | |