Republic of the Philippines
SULTAN KUDARAT STATE UNIVERSITY
Isulan, Sultan Kudarat
College of Computer Studies
S.Y. 2024 – 2025

IGE 002
Statistics with Computer Applications
Syllabus

2nd Semester
School Year 2024 – 2025

Republic of the Philippines
SULTAN KUDARAT STATE UNIVERSITY
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UNIVERSITY VISION

A trailblazer in arts, science and technology in the region.

UNIVERSITY MISSION

The University shall primarily provide advanced instruction and professional training in science and technology, agriculture, fisheries, education and other related field of study. It shall undertake research and extension services, and provide progressive leadership in its area of specialization.

UNIVERSITY GOAL

To produce graduates with excellence and dignity in arts, science and technology.

UNIVERSITY OBJECTIVES

a. Enhance competency development, commitment, professionalism, unity and true spirit of service for public accountability, transparency and delivery of quality services;
b. Provide relevant programs and professional trainings that will respond to the development needs of the region;
c. Strengthen local and international collaborations and partnerships for borderless programs;
d. Develop a research culture among faculty and students;
e. Develop and promote environmentally-sound and market-driven knowledge and technologies at par with international standards;
f. Promote research-based information and technologies for sustainable development;
g. Enhance resource generation and mobilization to sustain financial viability of the university.

Program Objectives and its relationship to University Goals:

PROGRAM OBJECTIVES (PO)	UNIVERSITY OBJECTIVES						
A graduate of BS in Information Technology (BSIT) can:	a	b	c	d	E	f	g
a. innovate technological concepts and ideas underpinning desired IT solutions;	/	/		/	/	/	/
b. administer competently the computer networks, systems development, software applications, hardware and maintenance;	/	/	/	/	/	/	/
c. design industry-based applications, infrastructures and technologies that will promote the advancement and development of the community;	/	/	/	/	/	/	/
d. demonstrate the code of conduct as well as the social and legal aspects of information technology; and	/	/	/	/	/	/	/

1. Course Code : IGE 002
2. Course Title : Statistics with Computer Applications
3. Prerequisite : None
4. Credits : 4.25 UNITS

5. Course Description:

This is an introductory course on Statistics. This course will discuss the basic concepts of Statistics. This course will also discuss the different measures of location and variability. It will also explore the methods sampling and designs of experiments as well as the very basics of testing of hypotheses and analysis of variance.

6. Course Learning Outcomes and Relationships to Program Educational Objectives

Course Learning Outcomes	Program Objectives			
At the end of the semester, the students can:	a	b	c	d
a. Understand the basic concepts in Statistics and apply it in information technology.	√		√	√
b. Perform gathering, organizing, presenting, analyzing, and interpreting data in information technology.	√		√	√
c. Plan, design, and conduct simple sampling survey.	√	√	√	√
d. Use statistical tools in testing hypothesis.	√	√	√	√
e. Perform responsible and ethical data gathering and information dissemination valuing public trust.			√	√

7. Course Content

Course Objectives, Topics, Time Allotment	Desired Student Learning Objectives	Outcome-Based Assessment (OBA) Activities	Evidence of Outcomes	Course Objectives	Program Outcomes	Values Integration
Topic: VGMO, Classroom Policies, Course Overview, Course Requirements, Grading System (1 hour)						
1. Discuss the VGMO of the University, Classroom Policies, scope of the course, course requirements, and grading system	1. Students can be aware of the VGMO of the University, Classroom Policies, scope of the course, course requirements, and grading system	• Individual class participation in class discussion and group presentation using a rubric to assess quality of participation	Rubric score cards of class participation accomplished by professor			Value of appreciation
Topic: Meaning and Definitions of Statistical Concepts (9 hours)						
1. Terms and concepts, and fields of Statistics. 2. Uses and misuses of Statistics. 3. Data Types 4. Scales of Measurement	Students can: • understand the concepts in Statistics • identify the uses and misuses of statistics in the Industry • classify data types • Identify and classify data according to its measurement scale.	• Research assignment (Misuses of statistics in media) • Quiz • Group discussion as to the effects of misuses of Statistics in society	➢ Research output ➢ Quiz Scores ➢ Rubric score cards of class participation accomplished by professor	a, b	a, b, c, d	Unity and teamwork Value of participation

Data Collection and Sampling Methods (15 hours)						
1. Use the different methods of Data Collection 2. Understand the elements of Survey Sampling 3. Conduct different types of Sampling procedures	Students can: • apply the different methods of data collection • plan and design a simple survey • conduct different types of sampling procedures.	• Quiz • Simple Survey ○ Gather and classify data	➢ Quiz Scores ➢ Rubric score cards of group output accomplished by professor	a, b, c, e	a, b, c,	Unity and teamwork Value of participation
Data Presentation (10 hours)						
1. Use Tabular Presentation 2. Use Graphical Presentation	1. Students can use different tabular presentations of data properly. 2. Students can use different graphical presentations of data properly.	• Observational Study ○ Data gathering and presentation in tabular and graphical form • Quiz	➢ Rubric score cards of group output accomplished by professor ➢ Individual self-assessment report ➢ Quiz Score	a, b, c, e	a, b, c,	Unity and teamwork Value of participation

Statistical Description of Data (10 hours)						
1. Different measures of central location a. Mean b. Median c. Mode 2. Different Measures of variability a. Range b. Variance c. Standard Deviation d. Correlation Coefficient	Students can: • Properly use and compute the different measures of central location using spreadsheet software • Properly use and compute the different measures of central location using spreadsheet software	• Quiz • Infographics ○ Displaying mean, median, or mode • Group Discussion on the issue of reliability of information found in the Web.	➢ Quiz scores ➢ Rubric score cards of individual output accomplished by professor	a, b, c, e	a, b, c, d	Value of creativity Value of public trust (correct information dissemination)
Variables and Hypotheses (6 hours)						
1. Understand the concepts involved in Inferential Statistics 2. Identify Variables 3. Establish Hypotheses 4. Determine Level of Significance	1. Students understand the concepts involved in Inferential Statistics 2. Students can identify Variables 3. Students can establish Hypotheses 4. Students can determine Level of Significance	• Research Paper (Part 1) ○ Identifying variables ○ Establishing hypothesis and level of significance	➢ Rubric score cards of group output accomplished by professor ➢ Individual self-assessment report	a, b, c, d, e	a, b, c, d	Value of unity and teamwork Value of public trust (correct information dissemination)

One-Sample and Two-Sample Tests (15 hours)						
1. One-sample t-test 2. Independent sample t-test 3. Related sample t-test	Students can: • Proper use and conduct one-sample and two-sample tests using spreadsheet software	• Research Paper (Part 2) ○ Testing Hypotheses (Comparing Means) ○ Interpreting Results	➢ Rubric score cards of group output accomplished by professor ➢ Individual self-assessment report	a, b, c, d, e	a, b, c, d	Value of unity and teamwork Value of public trust (correct information dissemination)
Multi-Sample Tests (20 hours)						
1. One-way ANOVA 2. Two-way ANOVA	Students can: • Proper use and conduct one-sample and two-sample tests using spreadsheet software	• Research Paper (Part 3) ○ Testing Hypotheses (ANOVA) ○ Interpreting Results	➢ Rubric score cards of group output accomplished by professor ➢ Individual self-assessment report	a, b, c, d, e	a, b, c, d	Value of unity and teamwork Value of public trust (correct information dissemination)
TOTAL HOURS: 90 hours **Lecture: 36 hours** **Laboratory: 50 hours** **Exam: 4 hours**						

8. Course Evaluation

Course Requirements: Completed Major Exams (Midterm/Final)
Complete Research Paper

Grading System:

Attendance/Quizzes/Activities	50%
Midterm Exam/Final Exam	50%
TOTAL	100%

Textbook:

1. Camm, et. Al., *Essentials of Business Analytics*, Cengage Learning, 2015

Textbook:

1. Mann, Prem S., *Introductory Statistics*, John Wiley and Sons, 2010
2. Hechanova, Rolando F., Hechanova, Ruby S. *Applied Parametric Statistics*. 2012
3. Steinberg, Wendy J, Price, Matthew. *Statistics Alive!. 3rd ed,* Sage Publications, 2020
4. Walpole, Ronald E. *Introduction to Statistics*, 3rd Edition 2009
5. Weiers, Ronald M., *Introduction to Business Statistics, 6th ed.* Thompson South-Western, 2008

Supplemental:

1. Online Math Learning, Statistics Games, http://www.onlinemathlearning.com/statistics-games.html
2. Sage Publisher, Student Study Site for Statistics Alive, http://www.uk.sagepub.com/steinberg2e/study/modules.htm
3. StatSoft Electronic Statistics Textbook, http://www.statsoft.com/Textbook
4. Transum.org, Statistics Lesson Starters and Online Activities, http://www.transum.org/Software/SW/Starter_of_the_day/Similar.asp?ID_Topic=58

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