



Republic of the Philippines  
**SULTAN KUDARAT STATE UNIVERSITY**  
Isulan, Sultan Kudarat  
**College of Industrial Technology**  
**S.Y. 2024 – 2025**



# **Stat 003**

## **Statistics with Computer Application**

### **Syllabus**

1<sup>st</sup> Semester  
School Year 2024 – 2025



Republic of the Philippines  
**SULTAN KUDARAT STATE UNIVERSITY**  
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#### UNIVERSITY VISION

A leading University in advancing scholarly innovation, multi-cultural convergence, and responsive public service in a borderless Region.

#### UNIVERSITY MISSION

The University shall primarily provide advanced instruction and professional training in science and technology, agriculture, fisheries, education and other relevant fields of study.

It shall also undertake research and extension services, and provide progressive leadership in its areas of specification.

#### STRATEGIC GOALS

- Deliver quality service to stakeholders to address current and future needs in instruction, research, extension, and production
- Observe strict implementation of the laws as well as the policies and regulations of the University.
- Acquire with urgency state-of-the-art resources for its service areas;
- Bolster the relationship of the University with its local and international customers and partners.
- Leverage the qualifications and competences in personnel action and staffing.
- Evaluate the efficiency and responsiveness of the University systems and processes.

#### 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.

## **University Mission**

- a. Provide advanced instruction and professional training in science and technology, agriculture, fisheries, education and other relevant fields of study;
- b. Undertake research and extension services;
- c. Provide progressive leadership in its areas of specification

## **Program Objectives and its relationship to University Goals:**

### **Program Educational Objectives (PEO) and its relationship to University Objectives**

PROGRAM EDUCATIONAL OBJECTIVES (PEO)	UNIVERSITY MISSION						
	a	b	c	d	e	f	g
<b>A graduate of Industrial Technology can:</b>							
a. Assume professional, technical, managerial and leadership roles in industrial organizations with the desired competence in the fields of practiced such as Automotive, Architectural drafting, Civil, Electrical, Electronics, Food and allied discipline.	✓	✓			✓	✓	
b. Innovative explicit and modern technologies in the advancement of economy, society, technology and environmental sustainability.	✓	✓	✓			✓	✓
c. Generate research-based information and technologies at par from international standard; and	✓	✓		✓	✓	✓	
d. Promote and transfer knowledge and technologies for effective and efficient school - industry partnership.	✓		✓	✓	✓		✓

**1. Course Code : Stat 003**

**2. Course Title : Statistics with Computer Application**

**3. Prerequisite : None**

**4. Credits : 3 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	a	b	c	d
<b>At the end of the semester, the students can:</b>				
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
<b>Topic: VGMO, Classroom Policies, Course Overview, Course Requirements, Grading System (1 hour)</b>						
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	<ul style="list-style-type: none"> <li>Individual class participation in class discussion and group presentation using a rubric to assess quality of participation</li> </ul>	Rubric score cards of class participation accomplished by professor			Value of appreciation

### Topic: Meaning and Definitions of Statistical Concepts (6 hours)

1. Terms and concepts, and fields of Statistics.  2. Uses and misuses of Statistics.  3. Data Types  4. Scales of Measurement	<b>Students can:</b> <ul style="list-style-type: none"> <li>understand the concepts in Statistics</li> <li>identify the uses and misuses of statistics in the Industry</li> <li>classify data types</li> <li>Identify and classify data according to its measurement scale.</li> </ul>	<ul style="list-style-type: none"> <li>Research assignment (Misuses of statistics in media)</li> <li>Quiz</li> <li>Group discussion as to the effects of misuses of Statistics in society</li> </ul>	<ul style="list-style-type: none"> <li>➤ Research output</li> <li>➤ Quiz Scores</li> <li>➤ Rubric score cards of class participation accomplished by professor</li> </ul>	a, b	a, b, c, d	Unity and teamwork
						Value of participation

### Data Collection and Sampling Methods (9 hours)

1. Use the different methods of Data Collection  2. Understand the elements of Survey Sampling  3. Conduct different types of Sampling procedures	<b>Students can:</b> <ul style="list-style-type: none"> <li>apply the different methods of data collection</li> <li>plan and design a simple survey</li> <li>conduct different types of sampling procedures.</li> </ul>	<ul style="list-style-type: none"> <li>Quiz</li> <li>Simple Survey               <ul style="list-style-type: none"> <li>o Gather and classify data</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Quiz Scores</li> <li>➤ Rubric score cards of group output accomplished by professor</li> </ul>	a, b, c, e	a, b, c,	Unity and teamwork
						Value of participation

### Data Presentation (6 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.	<ul style="list-style-type: none"> <li>• Observational Study               <ul style="list-style-type: none"> <li>◦ Data gathering and presentation in tabular and graphical form</li> </ul> </li> <li>• Quiz</li> </ul>	<ul style="list-style-type: none"> <li>➢ Rubric score cards of group output accomplished by professor</li> <li>➢ Individual self-assessment report</li> <li>➢ Quiz Score</li> </ul>	a, b, c, e	a, b, c,	Unity and teamwork  Value of participation

### Statistical Description of Data (9 hours)

1. Different measures of central location <ul style="list-style-type: none"> <li>a. Mean</li> <li>b. Median</li> <li>c. Mode</li> </ul> 2. Different Measures of variability <ul style="list-style-type: none"> <li>a. Range</li> <li>b. Variance</li> <li>c. Standard Deviation</li> <li>d. Correlation Coefficient</li> </ul>	Students can: <ul style="list-style-type: none"> <li>• Properly use and compute the different measures of central location using spreadsheet software</li> <li>• Properly use and compute the different measures of central location using spreadsheet software</li> </ul>	<ul style="list-style-type: none"> <li>• Quiz</li> <li>• Infographics               <ul style="list-style-type: none"> <li>◦ Displaying mean, median, or mode</li> </ul> </li> <li>• Group Discussion on the issue of reliability of information found in the Web.</li> </ul>	<ul style="list-style-type: none"> <li>➢ Quiz scores</li> <li>➢ Rubric score cards of individual output accomplished by professor</li> </ul>	a, b, c, e	a, b, c, d	Value of creativity  Value of public trust (correct information dissemination)
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### Variables and Hypotheses (6 hours)

1. Understand the concepts involved in Inferential Statistics	1. Students understand the concepts involved in Inferential Statistics	<ul style="list-style-type: none"> <li>• Research Paper (Part 1)           <ul style="list-style-type: none"> <li>◦ Identifying variables</li> <li>◦ Establishing hypothesis and level of significance</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➢ Rubric score cards of group output accomplished by professor</li> <li>➢ Individual self-assessment report</li> </ul>	a, b, c, d, e	a, b, c, d	Value of unity and teamwork Value of public trust (correct information dissemination)
2. Identify Variables	2. Students can identify Variables					
3. Establish Hypotheses	3. Students can establish Hypotheses					
4. Determine Level of Significance	4. Students can determine Level of Significance					

### One-Sample and Two-Sample Tests (7 hours)

1. One-sample t-test	Students can:	<ul style="list-style-type: none"> <li>• Proper use and conduct one-sample and two-sample tests using spreadsheet software</li> </ul>	<ul style="list-style-type: none"> <li>• Research Paper (Part 2)           <ul style="list-style-type: none"> <li>◦ Testing Hypotheses (Comparing Means)</li> <li>◦ Interpreting Results</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➢ Rubric score cards of group output accomplished by professor</li> <li>➢ Individual self-assessment report</li> </ul>	a, b, c, d, e	a, b, c, d	Value of unity and teamwork Value of public trust (correct information dissemination)
2. Independent sample t-test							
3. Related sample t-test							

### **Multi-Sample Tests (7 hours)**

1. One-way ANOVA	Students can:	<ul style="list-style-type: none"> <li>• Proper use and conduct one-sample and two-sample tests using spreadsheet software</li> </ul>	<ul style="list-style-type: none"> <li>• Research Paper (Part 3)           <ul style="list-style-type: none"> <li>◦ Testing Hypotheses (ANOVA)</li> <li>◦ Interpreting Results</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➢ Rubric score cards of group output accomplished by professor</li> <li>➢ Individual self-assessment report</li> </ul>	a, b, c, d, e	a, b, c, d	Value of unity and teamwork Value of public trust (correct information dissemination)
<b>TOTAL HOURS: 54 hours</b>							
<b>Lecture: 50 hours</b>							
<b>Exam: 4 hours</b>							

### **8. Course Evaluation**

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

**Grading System:**

Attendance/Quizzes/Activities	50%
Midterm Exam/Final Exam	50%
<b>TOTAL</b>	<b>100%</b>

**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! 3<sup>rd</sup> ed*, Sage Publications, 2020
4. Walpole, Ronald E. *Introduction to Statistics*, 3rd Edition 2009
5. Weiers, Ronald M., *Introduction to Business Statistics*, 6<sup>th</sup> 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](http://www.transum.org/Software/SW/Starter_of_the_day/Similar.asp?ID_Topic=58)

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