Fond du Lac Tribal and Community College
COURSE OUTLINE FORM

03/19/19

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

1. Prepared by:_____

2. Date submitted:_____

3. Date approved: Fall 1997 Date revised 5/6/25

4. Department/discipline: Mathematics

5. Department(s) endorsement(s):_____
(Signatures of the person(s) providing the endorsement are required.)

6. Course Title: Introduction to Statistics
Abbreviated course title for Transcripts (25 characters or less):_____

7. Course Designator: MATH 8. Course Level: 1030

9. Number of Credits: Lecture 3 Lab_____

10. Control Number (on site) 35 Control Number (online)_____

11. Catalog/Course description:

An introduction to statistics suitable for social and behavioral science majors, but also suitable for students in other disciplines. Topics include statistical theory and experimental design, descriptive statistics, probability distribution models, regression analysis and correlation, inference, and sampling methods.

12. Course prerequisite(s) or co-requisite(s): Accuplacer scores/Other courses
Prerequisite: Course placement determined by Multiple Measures
Co-requisite:

13. **Course Materials (**Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

Instructor's Choice

14. **Course Content** (Provide an outline of major topics covered in course)
1. Probability and probability distributions
2. Normal distribution models.
3. Descriptive statistics.
4. Binomial Distribution
5. Regression analysis and correlation.
6. The Central Limit Theorem
7. Hypothesis Testing with One Sample
8. Hypothesis Testing with Two Samples

15. **Learning Goals, Outcomes, and Assessment**
At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information.)
B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

Upon completion of this course, the student will be able to:

Learning Outcomes	**Competencies (CAC)**	**Cultural Standards**
1. Organize raw data into frequency distributions and various graphs for analysis.	B, C	2
2. Describe data using measures of central tendency, variation, and position.	C	
3. Find the probability of compound events involving additive, multiplicative, and/or conditioned properties.	C	4
4. Calculate descriptive statistics and probabilities for discrete probability distributions, including the binomial distribution.	C	
5. Analyze the normal distribution and its applications.	C	
6. Use methods of inferential statistics to test the significance of a hypothesis with one and two variables.	C	1, 4
7. Predict the value of a dependent variable using linear regression.	C	

WINHEC Cultural Standards:

1. **GIKENDAASOWIN – *Knowing knowledge:*** To develop human beings who value knowledge, learning, and critical thinking and are able to effectively use the language, knowledge, and skills central to an Ojibwe-Anishinaabe way of knowing.
2. **GWAYAKWAADIZIWIN – *Living a balanced way:*** To develop balanced human beings who are reflective, informed learners who understand the interrelatedness of human society and the

natural environment, recognize the importance of living in harmony with creation, and are able to apply a systems approach to understanding and deciding on a course of action.

3. **ZOONGIDE'EWIN – *Strong hearted:*** To increase the students' capacity to live and walk with a strong heart, humble and open to new ideas and courageous enough to confront the accepted truths of history and society.
4. **AANGWAAMIZIWIN – *Diligence and caution:*** To develop students' capacity to proceed carefully, after identifying, discussing, and reflecting on the logical and ethical dimensions of political, social, and personal life.
5. **DEBWEWIN – *Honesty and integrity:*** To increase students' capacity to think and act with honesty and integrity as they understand and face the realities of increasingly interdependent nations and people.
6. **ZAAGI' IDIWIN – *Loving and Caring:*** To encourage students' acceptance of the diversity within their school, community, and environment by developing healthy, caring relationships built on respect for all.
7. **ZHAWENINDIWIN – *Compassion:*** To expand students' knowledge of the human condition and human cultures and the importance of compassion especially in relation to behavior, ideas, and values expressed in the works of human imagination and thought.

16. **Minnesota Transfer Curriculum (MnTC):** List which goal area(s) – up to two – this course fulfills.

    See www.mntransfer.org

    Goal Area(s): 4

    Goal and Outcomes:
    Goal 4: Mathematical/Logical Reasoning
    Goal: To increase students' knowledge about mathematical and logical modes of thinking. This will enable students to appreciate the breadth of applications of mathematics, evaluate arguments, and detect fallacious reasoning. Students will learn to apply mathematics, logic, and/or statistics to help them make decisions in their lives and careers. Minnesota's public higher education systems have agreed that developmental mathematics includes the first three years of a high school mathematics sequence through intermediate algebra.

    Students will be able to:
    - Illustrate historical and contemporary applications of mathematics/logical systems.
    - Clearly express mathematical/logical ideas in writing.
    - Explain what constitutes a valid mathematical/logical argument (proof).
    - Apply higher-order problem-solving and/or modeling strategies.

17. Are there any additional licensing/certification requirements involved?
    _____Yes__X___No

    Provide the required documentation to show course meets required licensing/certification standards.