



# **MATH 210 – Elementary Statistics**

4 credits

Instructor: Patsy Schlosser

**Course Description:** An introduction to statistical methods of gathering, presenting and analyzing data. Topics include probability and probability distributions, confidence intervals, hypothesis testing, and linear regression and correlation.

**Prerequisite:** appropriate ACT or Acuplacer score

**Course Objectives:** Upon completion of the course the learner will be able to:

1. Students will be able to use statistical methods of gathering, presenting and analyzing data
2. Students will be able to work with probability and probability distributions and their applications
3. Students will be able to work with confidence intervals and their applications
4. Students will be able to work with hypothesis testing
5. Students will be able to work with linear regression and correlation and its applications

**Class Schedule:** M-F at 12:34-1:24

**Instructor:** Patsy Schlosser

*Office:* Edgeley High School Room 48

*Phone:* (701) 493-2292

*E-mail:* patsy.schlosser@k12.nd.us

*Office Hours:* at school 8:15-3:45

**Required Text/Material:**

1. Beginning Statistics 2<sup>nd</sup> edition by Warren, Denley, Atchley

**Course Requirements:**

Complete requested lessons, projects, and tests

## **Tentative Course Outline:**

Introduction to Statistics  
Graphical Descriptions of Data  
Numerical Descriptions of Data  
Probability, Randomness and Uncertainty  
Discrete Probability Distributions  
Normal Probability Distributions  
The Central Limit Theorem  
Confidence Intervals  
Confidence Intervals for Two Samples  
Hypothesis Testing  
Hypothesis Testing (Two or More Populations)  
Regression, Inference, and Model Building

**Classroom Policies:** Same as classroom policies for Edgeley High School classes

**Academic Integrity:** The academic community is operated on the basis of honesty, integrity and fair play. It is the expectation that all students, as members of the college community, adhere to the highest levels of academic integrity. This means that:

- Students are responsible for submitting their own work. Student work must not be plagiarized.
- Students must not cooperate on oral or written examinations or work together on evaluated assignments without authorization.
- If there is evidence of cheating, the student will receive an F on the assignment or exam.

## **General Education Goals/Objectives:**

- Goal 2: Demonstrates knowledge and application of technology.
  - Objective 2: Uses electronic resources for course related assignments and information
    - Skill 1: Selects appropriate electronic resources
  - Objective 4: Employs problem solving and critical thinking skills in order to solve a variety of different problems
    - Skill 1: Locates, evaluates, and applies research information
    - Skill 2: Analyzes information to determine its validity
    - Skill 3: Draws conclusions from information collected
- Goal 3: Demonstrates the ability to convert, calculate, and analyze a variety of mathematical problems
  - Objective 1: Utilizes mathematical equations to solve problems
    - Skill1: Solves equations and problems using the appropriate method

- Objective 2: Applies practical application of mathematics to everyday life
  - Skill 1: Constructs tables, charts, graphs based on data
  - Skill 2: Defines and demonstrates the use of decimals, percentages, and fractions
  - Skill 3: Solves word problems
- Objective 3: Employs problem solving and critical thinking skills in order to solve a variety of different problems
  - Skill 1: Locates, evaluates, and applies research information
  - Skill 2: Analyzes materials to determine their validity
  - Skill 3: Draws conclusions from information collected

**Relationship to Campus Theme:** Students will use an electronic based learning system along with traditional paper/pencil methods.

**Disabilities and Special Needs:** Students with designated disabilities and special needs will receive any modifications mentioned in their documentation.