Administrative Master Syllabus

Course Information

Course Title	Support Class for Elementary Statistical Methods
Course Prefix, Num. and Title	NCBM 0242
Division	Math & Physical Sciences
Department	Math/College Readiness Math
Course Type	Academic General Education Course (from ACGM, but not WCJC Core)
Course Catalog Description	Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended. This course is designed to help students accelerate through the developmental math sequence in one semester. It focuses on the college readiness concepts necessary to successfully complete Elementary Statistical Methods concurrently. This class includes directed review, just-in-time instruction, and emphasis on math specific study skills. This class must be successfully completed with a "C" or better to satisfy TSI requirements.
Pre-Requisites	TSI Placement and Advisor/Instructor Recommendation
Co-Requisites	MATH 1342 Elementary Statistical Methods

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours: Lab/Other Hours	2:2:0
Equated Pay Hours	2
Lab/Other Hours Breakdown: Lab Hours	0
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

Unit 1–Introduction to Statistics and Descriptive Statistics
Fractions, Decimals, and Percents
Operations with Fractions
Operations with Decimals
Order of Operations
Simplify Square Roots
Simplify Algebraic Expressions
Solving Linear Equations
Statistics Graphs
Mean, Median, Mode
Summation Notation
Working with Standard Deviations

Unit 2 –Probability and Discrete Probability Distributions
Intersection and Union of Sets
Simplifying Fractions
Operations with Fractions
Factorials
Basic Probability
Binomial Probability Review

Unit 3 –Normal Probability Distributions and Confidence Intervals
Percent Review
Normal Distribution Review
Solving formulas
Calculate z-scores
Sampling Distributions and Confidence Intervals Review
Sampling
Compound Inequalities
Absolute Value Equations and Inequalities
Confidence Intervals for Population Standard Deviations Review

Unit 4 –Hypothesis Testing with One Sample, Correlation, and Regression
Hypothesis Tests Review
The Rectangular Coordinate System
Slope
Slope-Intercept form of a Line
Point-Slope form of a Line
Correlation Coefficient and Line of Best Fit Review

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.
7. Solve linear regression and correlation problems.
8. Perform hypothesis testing using statistical methods.

Methods of Assessment:

Optional Methods of Assessment:
- Hour Exams
- Homework
- Quizzes
- Short Answer
- Discussion Board
- Participation
- Projects

Required text(s), optional text(s) and/or materials to be supplied by the student:

"Elementary Statistics: Picturing the World", by Larson and Farber, Pearson, 7th edition

Students must have computer access to the WCJC website, their WCJC student email and online accounts. WCJC has open computer labs, with internet access, on all campuses for students to use.

Suggested Course Maximum:

15

List any specific or physical requirements beyond a typical classroom required to teach the course.

None

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

A. MATH 1342 Grade	25%
B. Other Course Requirements	75%

A = 90-100
B = 80-89
C = 70-79
D = 60-69
F = 59 or below

Curriculum Checklist:

☒ **Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.

☐ **Administrative WCJC Core Course**. Attach the Core Curriculum Review Forms

  ☐ Critical Thinking

  ☐ Communication

  ☐ Empirical & Quantitative Skills

  ☐ Teamwork

  ☐ Social Responsibility

  ☐ Personal Responsibility

☐ **WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist