

Administrative Master Syllabus

Course Information

Course Title	Support Course 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	<p>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.</p> <p>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.</p>
Pre-Requisites	TSI Placement or MATH 0308
Co-Requisites	MATH 1342 Elementary Statistical Methods

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	2:2:0
Lab/Other Hours	
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
Department Head:		
Division Chair:		
VPI:		

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:

- 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, Pearson, 8th 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.

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|------------------------------|-----|
| 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