

8/30/2022

DATE

MSD DIVISION

 REQUIRED COURSE
 ELECTIVE COURSE

 NEW COURSE
 REVISION

Lake Land College

Course Information Form

COURSE NUMBER:		MAT-125		TITLE: (30 Characters Max)		Statistics		
SEM CR HRS:	3	Lecture:	3	Lab:	0	ECH:	3	
Course Level:	<input type="checkbox"/> Gen Ed / IAI <input type="checkbox"/> Career/Technical <input checked="" type="checkbox"/> Baccalaureate / Non-IAI <input type="checkbox"/> Dev Ed/ Not in Degree Audit		Clinical Practicum:	0	Work-based Learning:	0	WBL ECH:	0
COURSE PCS #	11 - 27.0501		IAI Code	M1902		Contact Hours (Minutes/Week)		
Repeatable (Y/N):	Pass/Fail (Y/N):	Variable Credit (Y/N):	Min:	Max:	16 Wks	150	8 Wks	300
Prerequisites:	Placement by assessment or MAT-115 or MAT-129 with a grade of "C" or higher or STEM Transitional Math (TM001). Also one year of high school geometry or MAT-009.							
Corequisites:	None							
Catalog Description: (40 Word Limit)	Application of elementary principles of descriptive statistics including frequency distribution, graphical presentation, measures of center, location and variation. Elements of probability, sampling techniques, binomial and normal distribution, correlation/regression and hypothesis testing. Graphing calculator and Excel required.							

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Descriptive Statistics / Pictures of Data	11			
Probability	7			
Probability Distributions	5			
Normal Probability Distributions	6			
Confidence Intervals	4			
Hypothesis Testing	3			
Correlation and Regression	5			
Technology (Graphing Calculator & Excel)	4			
TOTAL	45	0	0	0

EVALUATION

QUIZZES <input checked="" type="checkbox"/>	EXAMS <input checked="" type="checkbox"/>	ORAL PRES <input type="checkbox"/>	PAPERS <input type="checkbox"/>
LAB WORK <input type="checkbox"/>	PROJECTS <input checked="" type="checkbox"/>	COMP FINAL <input checked="" type="checkbox"/>	OTHER <input checked="" type="checkbox"/> homework

COURSE MATERIALS

TITLE:	Elementary Statistics
AUTHOR:	Mario F. Triola
PUBLISHER:	Addison-Wesley Publishing Company
VOLUME/EDITION/URL:	13th
COPYRIGHT DATE:	2018

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Descriptive Statistics / Pictures of Data	11	Demonstrate an understanding of the following topics: Introduction to Statistics Tables and Graphs Summarizing Data Measures of Central Tendency Measures of Variation Measures of Position by displaying these skills in solving applied problems.
Probability	7	Demonstrate an understanding of the following topics: Introduction to Probability Addition Rule Multiplication Rule Conditional Probability Complements and Odds Permutations and Combinations by displaying these skills in solving applied problems.
Probability Distributions	5	Demonstrate an understanding of the following topics: Discrete Probability Distributions Binomial Distributions Poisson Distribution by displaying these skills in solving applied problems.

Normal Probability Distributions	6	Demonstrate an understanding of the following topics: Standard Normal Distributions Applications of Normal Probability Distributions Sampling Distributions Central Limit Theorem by displaying these skills in solving applied problems.
Confidence Intervals	4	Demonstrate an understanding of the following topics: Estimates and Sample Sizes Student t Distribution Chi-Square Distribution by displaying these skills in solving applied problems.
Hypothesis Testing	3	Demonstrate an understanding of the following topics: Hypothesis Testing p-value method by displaying these skills in solving applied problems.
Correlation and Regression	5	Demonstrate an understanding of the following topics: Scatterplots Linear Correlation Correlation Coefficient r Bi-variate Data Regression by displaying these skills in solving applied problems.
Technology (Graphing Calculator & Excel)	4	Illustrate an ability to use technology (graphing calculator and Excel to conduct statistical analysis and interpret the results.
Insert New Line Above this Line		
	45	

Outcomes*	At the successful completion of this course, students will be able to:
Course Outcome	Collect, analyze and interpret data using descriptive statistics.
Course Outcome	Compute and understand probability.
Course Outcome	Set up a probability distribution using the rules of probability including the multiplication rule, binomial probability, etc.
Course Outcome	Demonstrate the normal distribution with its role in basic statistical methods
Course Outcome	Show the central limit theorem and its role in basic statistical methods.
Course Outcome	Recognize correlation and regression and its role in basic statistical methods.
Course Outcome	Apply technology (graphing calculator and Excel) to conduct statistical analysis and interpret the results.
Program Outcome	
Laker Learning Competency	

*Course and program outcomes will be used in the software for outcomes assessment and should include at least 1 Laker Learning Competency. Limit to 3 - 5.