

8/30/2022 DATE

 REQUIRED COURSE
 ELECTIVE COURSE

 MSD DIVISION
 NEW COURSE
 REVISION

Lake Land College

Course Information Form

COURSE NUMBER:		MAT-124		TITLE: (30 Characters Max)		Statistics Pathway				
SEM CR HRS:	4	Lecture:	3	Lab:	2	ECH:	5			
Course Level:	<input type="checkbox"/> Gen Ed / IAI <input checked="" type="checkbox"/> Baccalaureate / Non-IAI		<input type="checkbox"/> Career/Technical <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 Per Week)				
Repeatable (Y/N):	Pass/Fail (Y/N):		Variable Credit (Y/N):		Min:	Max:	16 Wks	250	8 Wks	500
Prerequisites:	Placement by assessment. QL/Stats Transitional Math (TM002). Also one year of high school geometry or MAT-009.									
Catalog Description: (40 Word Limit)	Application of elementary principles of descriptive statistics. Elements of probability, sampling techniques, binomial and normal distribution, correlation/regression and hypothesis testing. Graphing calculator and Excel required. Intended for students that don't assess directly into MAT-125 Statistics. Includes supplemental instruction lab.									

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Descriptive Statistics / Pictures of Data	11	7		
Probability	7	5		
Probability Distributions	5	3		
Normal Probability Distributions	6	4		
Confidence Intervals	4	3		
Hypothesis Testing	3	2		
Correlation and Regression	5	3		
Technology (Graphing Calculator & Excel)	4	3		
TOTAL	45	30	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	18	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	12	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	8	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	10	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	7	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	5	Demonstrate an understanding of the following topics: Hypothesis Testing p-value method by displaying these skills in solving applied problems.
Correlation and Regression	8	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)	7	Illustrate an ability to use technology (graphing calculator and Excel to conduct statistical analysis and interpret the results.
Insert New Line Above this Line		
	75	

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

* Course Outcomes will be used in the Assessment Software for Outcomes Assessment. Limit to 3 - 5.