

Course Title:	Elementary Statistics														
Course Code:	LONS MATH 110														
Subject:	Mathematics														
Credits:	4														
Contact Hours:	50 = 4 credits														
Semester/Term:	☒ Semester														
Course Description:	This is a basic course in the principles and techniques of statistics. The course will cover descriptive and inferential statistics, using Microsoft Excel and related software. Classification of data, probability theory, measures of central tendency, measures of dispersion, normal distribution, population parameters, testing hypotheses, analysis of variance, and correlation and regression are among the topics to be covered.														
Course Requirements:	Course Text - <i>Subject to change</i> Triola, M. (2017). <i>Elementary Statistics</i> (13th ed). New York: Pearson Education. ISBN: 978-0134462455; Cost: To Be Determined Some additional digital access materials and/or copies may be provided - TBC by course instructor. Additional Readings and Resources Additional materials will be available from the instructor on the course Canvas site. Assignments <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 60%;">Course Requirements</th><th style="width: 40%;">Percentages</th></tr> </thead> <tbody> <tr> <td>Exam 1</td><td>20%</td></tr> <tr> <td>Exam 2</td><td>20%</td></tr> <tr> <td>Exam 3</td><td>20%</td></tr> <tr> <td>Assignments</td><td>20%</td></tr> <tr> <td>Final Exam</td><td>20%</td></tr> <tr> <td>Total</td><td>100%</td></tr> </tbody> </table> There will be three exams and a final exam. There will be four graded assignments, three of which will be statistics problems. One of the assignments will be a research paper.	Course Requirements	Percentages	Exam 1	20%	Exam 2	20%	Exam 3	20%	Assignments	20%	Final Exam	20%	Total	100%
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Learning Outcomes and/or Expected Student Competencies and Assessment Measures:	On completion of the course, students should be able to: <table border="1"> <thead> <tr> <th>Learning Outcomes</th><th>Course Requirement that will be used to assess the student's achievement of this outcome</th></tr> </thead> <tbody> <tr> <td>Use critical thinking skills to evaluate the design and results of surveys and experiments</td><td>All assignments and exams</td></tr> <tr> <td>Construct frequency tables, from raw data</td><td>All assignments and exams</td></tr> <tr> <td>Calculate the mean, median, and mode of a data set</td><td>All assignments and exams</td></tr> <tr> <td>Calculate the variance and standard deviation of a data set</td><td>All assignments and exams</td></tr> <tr> <td>Calculate probabilities</td><td>All assignments and exams</td></tr> <tr> <td>Compare and contrast distributions including probability distributions and normal probability distributions</td><td>All assignments and exams</td></tr> <tr> <td>Estimate a population proportion and mean</td><td>All assignments and exams</td></tr> <tr> <td>Formulate and test a hypothesis</td><td>All assignments and exams</td></tr> <tr> <td>Determine confidence intervals for population parameters</td><td>All assignments and exams</td></tr> <tr> <td>Calculate regression and correlation coefficients</td><td>All assignments and exams</td></tr> <tr> <td>Perform Chi-Square Tests for Independence and Goodness of Fit</td><td>All assignments and exams</td></tr> <tr> <td>Calculate one-way analysis of variance</td><td>All assignments and exams</td></tr> </tbody> </table>	Learning Outcomes	Course Requirement that will be used to assess the student's achievement of this outcome	Use critical thinking skills to evaluate the design and results of surveys and experiments	All assignments and exams	Construct frequency tables, from raw data	All assignments and exams	Calculate the mean, median, and mode of a data set	All assignments and exams	Calculate the variance and standard deviation of a data set	All assignments and exams	Calculate probabilities	All assignments and exams	Compare and contrast distributions including probability distributions and normal probability distributions	All assignments and exams	Estimate a population proportion and mean	All assignments and exams	Formulate and test a hypothesis	All assignments and exams	Determine confidence intervals for population parameters	All assignments and exams	Calculate regression and correlation coefficients	All assignments and exams	Perform Chi-Square Tests for Independence and Goodness of Fit	All assignments and exams	Calculate one-way analysis of variance	All assignments and exams
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	Session 8	Estimating Population Proportion
	Session 9	Estimating Population Mean
	Session 10	Basics of Hypothesis Tests Hypothesis Testing for Proportions
	Session 11	Two Proportions Two Means Independent Two Dependent Samples (Matched Pairs)
	Session 12	Correlation & Regression Analysis Goodness of Fit Contingency Tables ANOVA
Other Policies:	Expectations Professional behavior is expected of all students. This includes preparation for classes, on-time attendance at synchronous class sessions, attendance at all group sessions and appropriate participation in the form of attentiveness and contributions to the course. Respect for the academic process is the major guiding principle for professional behavior and extends to all communications, including email. Attendance/Participation Prompt attendance, full preparation, and active participation in class discussions are expected from every student in every class session. This includes participation in online discussion boards as well as during synchronous class sessions. Course Policies For email communications, students must use their Arcadia University email account. Students are responsible for any information provided by e-mail or through postings in the learning management system. This syllabus is subject to change, and any changes will be communicated to you via email or the learning management system. Plagiarism Representation of another's work or ideas as one's own in academic submissions is plagiarism, and is cause for disciplinary action. <i>Cheating</i> is actual or attempted use of resources not authorized by the instructor(s) for academic submissions. Students caught cheating in this course will receive a failing grade. <i>Fabrication</i> is the falsification or creation of data, research or resources to support academic submissions, and cause for disciplinary action. Late or Missed Assignments Will not be accepted for grading.	

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	Students with Disabilities Persons with documented disabilities requiring accommodations to meet the expectations of this course should disclose this information while enrolling into the program, and before the start of term so that appropriate arrangements can be made. Incident Reporting and Compliance with Sexual Harassment and Misconduct Policies Arcadia University is committed to supporting students abroad who are affected by any incident which impacts their safety or well-being, including but not limited to: reports of possible crime, behavioral issues, discrimination or harassment, sexual misconduct, hospitalization, other health concerns, or issues prompting early program departure ("Incidents"). This may include assisting affected individuals with accessing the criminal justice system or internal processes, as available. Arcadia generally defers to the wishes of the individual affected, but Arcadia does comply with the University's Sexual Harassment and Misconduct Policy and any relevant laws for all programs that operate under its auspices, and there may be circumstances where an individual's autonomy may be limited. Information about Arcadia's policies and procedures, including the Policy Prohibiting Sexual Harassment and Sexual Misconduct, can be found in the Student Handbook.
Prerequisites:	Students must be prepared for college-level mathematics at the 100-level, and this must be confirmed by their home school.
Country and Program Connection:	Home school mathematics requirement.