Intro to Statistics (QL)

MATH - 1040 004

Course Description

Course Description: Emphasizes descriptive and inferential statistical procedures through simulation, sampling design, descriptive statistics, linear regression and correlation, probability, sampling distributions, hypothesis testing and confidence intervals, and technology to perform statistical analyses. Recommended for students desiring statistical literacy.

Pre-Requisite(s): ENGL 0900 w/C grade or better or appropriate placement score, AND within last year, MATH 0990 w/C grade or better OR appropriate placement score.

Semester: All

Course Student Learning Outcomes

- Identify and explain that Statistics is a science that includes asking questions, collecting data, using statistical methods to summarize the data, making inferences, forming conclusions, and making decisions.
- Effectively summarize data by identifying different types of data, variables and studies, recognizing and applying concepts of experimental design and sampling, constructing and interpreting graphical representations of data, determining and using measures of central tendency, variation, and relative standing to describe and compare distributions.
- Calculate and interpret probabilities.
- Identify and apply the Normal distribution model.
- Describe sampling distributions and the results of the Central Limit Theorem.

- Apply and interpret the concepts of statistical inference including hypothesis testing and estimation using confidence intervals.
- Perform and interpret a linear regression analysis.
- Organize and communicate statistical work clearly and logically, using correct notation and precise explanations.
- Use statistical software to perform analyses using normal models and randomization and simulation.

College Wide Student Learning Outcomes

- Acquiring substantive knowledge in the field of their choice
- Developing quantitative literacy
- Developing the knowledge and skills to be civically engaged
- Thinking critically
- Communicating effectively

Course Prerequisites

Within the past year you must have completed an algebra course (such as Math 0990 or Math 1010), with a grade of C or better. Acceptable substitutions for this course are an appropriate Accuplacer, ACT, or SAT math score, or placement through the SLCC placement process. Additionally, RDG/ENGL 0900 with a grade of C or better, or an appropriate Accuplacer, ACT, or SAT reading score. If you do not have documentation for these prerequisites, you should enroll in a math class more appropriate for your background.

Engagement Plan

I will respond to email within 24 hours. I will offer feedback on major assignments within 72 hours. The best way to contact me is via the Canvas Inbox, as I will prioritize this email over other modes of communication.

Required Text or Materials

Title: Introductory Statistics with Randomization and Simulation
Subtitle: (Online version available free within Canvas - linked on Homepage)

Title: GeoGebra Software
Subtitle: This is the calculator software required for the course

For more information on textbook accessibility, contact Accessibility & Disability Services at ads@slcc.edu.

General Education Information

QL

This course fulfills the above requirement for the General Education Program at Salt Lake Community College. It is designed not only to teach the information and skills required by the discipline, but also to develop vital workplace skills and to teach strategies and skills that can be used for life-long learning.

General Education courses teach basic skills as well as broaden a student's knowledge of a wide range of subjects. Education is much more than the acquisition of facts; it is being able to use information in meaningful ways in order to enrich one's life.

While the subject of each course is important and useful, we become truly educated through making connections of such varied information with the different methods of organizing human experience that are practiced by different disciplines. Therefore, this course, when combined with other General Education courses, will enable you to develop broader perspectives and deeper understandings of your community and the world, as well as challenge previously held assumptions about the world and its inhabitants.

Brief Description of Assignments/Exams

HOMEWORK: The assigned homework exercises are the required minimum for you to demonstrate the learning objectives of the course and the mastery of the course concepts. You are encouraged to work more exercises than those assigned. Regular practice is essential in learning statistics. You should be prepared to spend at least two hours studying outside of the class for each hour you spend in class. Many students find that much more time is required in order to perform as well as they desire on exams. Homework will be submitted online. Details of how and when homework is due will be discussed in class.

ACTIVITIES/PROJECTS: Throughout the semester various activities are assigned. These will allow you to engage with the course material, explore applications, learn to use technology for statistical analyses, and practice statistical reasoning and reporting. Some of these may be quite short, some will take longer.

QUIZZES: Each chapter will have one or two quizzes covering the statistical content for the chapter. You have 2 attempts on these quizzes. (They are not timed). You will also have quizzes on algebra content.

MID-TERM EXAMS:

All exams are taken in person. They are not taken online.

You are allowed to bring a calculator and one full page of notes (8.5x11) front and back to each exam. The majority of the test questions will not be multiple choice, but will require you to carefully show your work. You may earn partial credit on these questions. Show all steps toward your final solution clearly and concisely. Answers with no logical steps or work that cannot be read or clearly followed will be marked incorrect. Although GeoGebra software can't be used within the exams, screenshots of GeoGebra content will be within the exam for you to use and/or interpret.

FINAL EXAM:

The final exam for Math 1040 will be a paper/pencil comprehensive departmental examination emphasizing topics listed under the course objectives taken in a SLCC Testing Center (for online students) or in class (for face-to-face students). You are allowed to bring a calculator and one full page of notes (8.5x11) front and back to this exam. You

will have 120 minutes to complete the exam. More information is available in your CANVAS course.

It is an SLCC Math Department rule that students attaining a score of less than **50%** on the final shall receive a grade no higher than "D" for the course.

Late Work Rule

Homework (OHM Lumen)

Homework can be completed until the next midterm exam and there is no late penalty. Once the midterm exam has happened, those homework assignments will not be able to be accessed.

Written Assignments/ Projects

Projects will have a 2% late penalty assessed per day, with a maximum penalty of 50%, but projects can be turned in late until the end of the semester.

Quizzes, Exams and Final Exam

Chapter quizzes will have the same policy as homework assignments.

Midterm and final exams must be taken on the date specified by the course schedule unless prior arrangements are made with me. If an emergency situation prevents you from being able to take an exam on the correct date, contact me as soon as possible to see what can be done.

Using AI Responsibly and Cheating Rule

When used wisely, AI can help us study smarter, spark creativity, and better understand complex topics. But with that power comes responsibility: to ensure that AI *supports* our learning rather than *replaces* it.

In this course, you are expected to use AI tools ethically and responsibly. Using AI to assist your learning is one thing; using it to do your work for you is another.

Submitting AI-generated work as your own is a form of academic dishonesty and could result in a 0 grade and could even be reported as an "Academic Misconduct Violation."

Instructors will be reviewing submissions carefully and are trained to recognize signs of inappropriate AI use. Misusing AI may be considered academic dishonesty and can result in serious consequences.

Any form of cheating will minimally result in a failing grade of 0% for that assignment/exam without any possibility for that work to be made up, resubmitted, or for the failing grade to be substituted by any other work's grade. Moreover, cheating on a single assignment or exam can result in a failing grade for the entire class; this is typically the prerogative of the individual instructor. Cheating is not tolerated, so, take heed and do honest work to learn and develop intellectually. For more details about academic dishonesty, consult the Student Code of Conduct, where this topic is addressed in section C (see below too):
https://www.slcc.edu/policies/policies/student_affairs/8.1.050.aspx,Sanctions for Academic Misconduct (taken from the Student Code of Conduct): Faculty, program directors, associate deans, deans, and the provost for Academic Affairs are authorized to impose anyone or a combination of the following sanctions after finding a student responsible for acts of academic misconduct.

The possible sanctions include, but are not limited to

- verbal warning and reprimand,
- restriction of privileges, such as access to lab facilities, library facilities, or testing centers,
- failure of the exam, quiz, project, or other assessment,
- failure for the course,
- withdrawal from the course, or
- withdrawal from the academic program.

*****Upon the circumstance of catching a student cheating, even if the infraction seems minor or the student is remorseful, instructors are required to fill out the following form (the Dean of Students uses these forms to establish patterns of behavior):

Academic Misconduct Violation Reporting Form This form may be used by SLCC faculty members to report academic misconduct such as cheating, plagiarism, data misrepresentation, and unauthorized access as defined in the Code of Student Rights and Responsibilities. This Academic Misconduct Violation Form provides guidance to instructors, ensures minimum due process requirements are met, and allows for the tracking of repeat offenders at the College level.

Grading Scale

Your grade will be based on an accumulation of scores as follows:

Homework	15%
Activities/Projects	10%
Chapter Quizzes	5%
Reading Quizzes	5%
Mid-term Exams	40%
Final Exam	25%

Grade	Min.	Grade	Min.	Grade	Min.	Grade	Min.	Grade	Range
		B+	87%	C+	77%	D+	67%		
A	93%	B	83%	C	73%	D	63%	E	Below 60%
A-	90%	B-	80%	C-	70%	D-	60%		

How to Navigate to Canvas

Keys for Success (how to succeed in the course)

Statistics is a challenging course, however there are many available resources to help you succeed.

STRATEGIES FOR SUCCESS:

PUT IN THE TIME, STAY ON SCHEDULE! It is very important in this class that you set aside time each day to work on the course so that you can remain on schedule. You can do a better job at both understanding and retaining the material if you learn at an even

pace. Trying to “cram” too much in one sitting will result in frustration and lower retention of the material. Recognize that you need time both to learn the material and time to complete your homework, etc. It will take a significant investment of time each day to be successful in this course. It is important that you have the course calendar readily available and refer to it frequently.

LEARN HOW TO LEARN AND WHERE TO GET HELP As with any math course, you need to find the best way for you to learn the concepts and skills. There are many options, including reading the textbook, taking notes, listening to an audio lecture, watching a video lecture, and many others. It is also crucial that you seek help when you need it. At the very beginning of the course you should spend time familiarizing yourself with available resources.

The STEM Learning Resources department works in collaboration with the Mathematics department to provide a variety of free academic support services. These services include tutoring, workshops and project-based learning. For times and locations please go to this website: https://www.slcc.edu/stem/index.aspx

CALCULATOR: Help in learning to use GeoGebra is available in videos on Canvas and in the campus math lab or Learning Centers. You may want to bring a handheld calculator, that does not connect to the internet, for in-class exams.

USE THE SLCC RESOURCES General Learning Support & Tutoring Services provide support for SLCC students enrolled in any class at the College. All resources are provided free-of-charge. Ask your instructor about discipline-specific learning support and tutoring services.

TUTORING: If you need help with this course, there is Tutoring offered for free to all SLCC students. For more information, go to the STEM Learning Resources web page.

STEM Learning Centers: provide free assistance in Math, Science, Accounting, CSIS and Allied Health Classes at 6 campus locations.

Student Writing and Reading Center**: provides in-person and online feedback on all writing assignments. It also provides** tutoring in reading and conversation.

Library Services: provides research help, print and online resources, computers and study space.

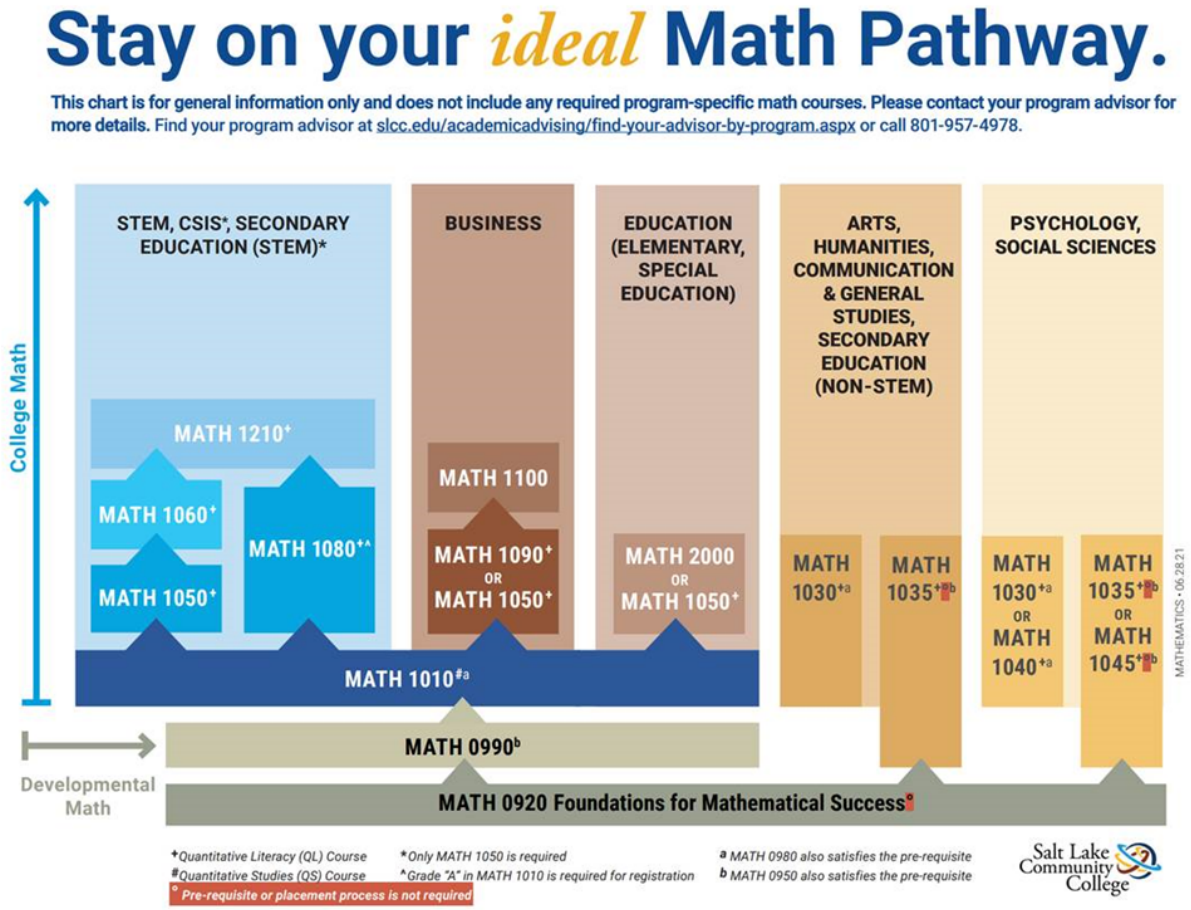
eLearning Support: provides support for navigating online and hybrid classes.

Business Resource and Innovation Center: provides tutors and a study space for students in Business and CSIS courses.

References for community and college resources: Although this is not an exhaustive list, it is a great place for your students to start looking to get the resources they need. The resources include after-school programs, childcare facilities, family and personal crisis centers, and much more. Please check it out.

https://www.slcc.edu/drc/community-resources.aspx

SLCC Math Pathways



http://www.slcc.edu/placement/dt/math/pathway.aspx

Contingency Plan

Under Utah legislation, the governor can now call a "Remote Workday" given certain circumstances. In the event that class is canceled due to unforeseen circumstances such as inclement weather, power outages, or other emergencies, we will follow a contingency plan to ensure that you are able to continue your learning and stay on track in this course. You should check your Canvas announcements and inboxes to learn what is expected of you. Additionally, remember that there is a YouTube page with lectures for anytime you miss class. These resources are available within Canvas as well as on the YouTube channel https://www.youtube.com/@introductiontostatisticsat664

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

For more information, navigate to the Institutional Policies tab on the Institutional Syllabus page.

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, visit the Institutional Syllabus page under the Tutoring and Learning Support tab. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

Advising and Counseling Support Services

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, visit the Institutional Syllabus page under the Advising and Counseling Support Services tab. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

SLCC Student Academic Calendar

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	3.1-3.2a Homework	Assignment	15
	3.2b Homework	Assignment	11
	3.2c Homework	Assignment	24
	3.2d Homework	Assignment	26
	3.3-3.4 Homework	Assignment	29
	3.5a Homework	Assignment	32
	3.5b Homework	Assignment	56
	3.5c Homework	Assignment	69
	4.1a Homework	Assignment	27
	4.1b Homework	Assignment	21

Due Date	Assignment Name	Assignment Type	Points
	4.1c Homework	Assignment	55
	4.1d Homework	Assignment	36
	4.2a Homework	Assignment	46
	4.2b Homework	Assignment	44
	4.2c Homework	Assignment	60
	4.3a Homework	Assignment	6
	4.3b Homework	Assignment	40
	5.1-5.2 Homework	Assignment	27
	5.3 Homework	Assignment	57
	5.4 Homework	Assignment	29
	5.5 Homework	Assignment	41
	5.6 Homework	Assignment	21
	5.7a Homework	Assignment	33
	5.7b Homework	Assignment	40
	6.1 Homework	Assignment	22
	6.2 Homework	Assignment	12
	6.3 Homework	Assignment	39
	6.4 Homework	Assignment	16
	6.5a Homework	Assignment	41
	6.5b Homework	Assignment	64
	8/28 Attendance	Quiz	1
	9/2 Attendance	Quiz	3

Due Date	Assignment Name	Assignment Type	Points
	Chapter 1: Quiz	Quiz	13
	Chapter 2: Quiz	Quiz	26
	Chapter 3: Quiz A	Quiz	8
	Chapter 3: Quiz B	Quiz	24
	Chapter 4: Quiz A	Quiz	21
	Chapter 4: Quiz B	Quiz	29
	Chapter 4: S4.2 Symbols Definitions Assignment	Quiz	17
	Chapter 5: Quiz A	Quiz	19
	Chapter 5: Quiz B	Quiz	14
	Chapter 6: Quiz	Quiz	29
	Final Exam	Assignment	100
	GE Reflection - Signature Assignment Part V: Reflection Paper	Assignment	25
	Midterm Exam 1	Assignment	100
	Midterm Exam 2	Assignment	100
	Midterm Exam 3	Assignment	100
	Midterm Exam 4	Assignment	100
9/4/25	9/4 Attendance	Quiz	1
9/4/25	9/4 Reading Quiz	Quiz	1
9/9/25	9/9 Attendance	Quiz	1

Due Date	Assignment Name	Assignment Type	Points
9/11/25	1.1 Homework	Assignment	7
9/11/25	1.2 Homework	Assignment	13
9/11/25	1.3 Homework	Assignment	15
9/11/25	1.4 Homework	Assignment	22
9/11/25	2.1 Homework	Assignment	12
9/11/25	2.2-2.3 Homework	Assignment	48
9/11/25	2.4 Homework	Assignment	21
9/16/25	GE Signature Assignment Part I: Skittles Project	Assignment	25