Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: https://catalog.uvu.edu/

Semester: Spring
Year: 2025
Course Prefix: MAT
Course and Section #: 1035-602
Course Title: Quantitative Reasoning with Integrated Algebra QL
Credits: 6

Course Description

Teaches students to communicate, interpret, and analyze quantitative information found in the media and in everyday life to make sound personal, professional, and civic decisions. Provides the necessary algebraic content taught in context.

Course Attributes

This course has the following attributes:
☒ General Education Requirements
☐ Global/Intercultural Graduation Requirements
☐ Writing Enriched Graduation Requirements
☐ Discipline Core Requirements in Program
☐ Elective Core Requirements in Program
☐ Open Elective
Other: *Click here to enter text.*

Instructor Information

Instructor Name: Anne Brown

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Explain real world information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words), including making reasonable predictions of trend data.
2. Convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words) that are appropriate and accurate.
3. Perform calculations that are sufficiently comprehensive and elegant (clear, concise, etc.) to solve authentic problems.

4. Analyze real world data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions.
5. Make and evaluate important assumptions in estimation, modeling, and data analysis using a compelling rationale for why each assumption is appropriate.
6. Express quantitative evidence in support of an argument or specific purpose (in terms of what evidence is used and how it is formatted, presented, and contextualized).
7. Use algebra to support objectives 1-6.

Course Materials and Texts

REQUIRED SOFTWARE LICENSE: In this class, it is required to have a software license for Lumen OHM. You can purchase access to just the online homework system by visiting any Lumen assignment inside of Canvas. Alternatively, you may be able to find the access codes sold in the UVU bookstore. However, these codes are often in short supply.
TEXTBOOK (Optional): Math in Society; David Lippman - Please note that this textbook is already included in the READ portions of Canvas. You are not expected to purchase the textbook!
Microsoft Office Account (Required): We will be making extensive use of the Microsoft Office suite, especially Excel, Word, and OneNote. Fortunately, as UVU students, you have access to this suite free of charge. Please visit UVU's Microsoft Office 365 page (Links to an external site.) to get your access. I also strongly encourage using the Desktop applications over the Online version, especially when you use OneNote, as it has a better feature set. See the OneNote videos and assignments for more information. You will need this same account to use Microsoft Teams for any group meetings your group chooses to hold, or if you need to attend class from home.
Webcam (Required): You will need a simple webcam to facilitate communication with the class, communication with your group, and to have your test proctored.

Course Requirements

Course Assignments, Assessments, and Grading Policy
HOMEWORK: Homework will be done online using the LumenOHM (OHM) system. Due dates are listed on both the modules page and inside the LumenOHM system. Homework is graded directly by the OHM program, and is graded on an individual question basis. Each part of each module contains a single OHM assignments, and assignments vary from 10 to 30 questions. The OHM system allows several late passes, which you can use on an assignment by assignment basis to work through it and receive credit after the due date. You can see the number of late passes available to you inisde of the Lumen homework assignments.
DISCUSSIONS/MINI PROJECTS: Each week may consist of one or two mini-projects. All mini projects are expected to be completed as groups, though some will have individual portions that each student needs to complete on their own. The mini-project information can be found in Canvas or is given during class, although some rely on other tools, such as Excel, for completion. In addition, many mini projects also include a discussion, where students will have the opportunity to explore topics together. Posts to the discussion should add to the conversation and support your point of view. Comments that do

not add significantly to a discussion will receive no credit. It is okay to disagree in a discussion. In fact, much learning happens when we disagree. However, we need to be respectful and keep our classroom a safe place to learn. Due dates for the original group post to the discussion correspond with their initial due date. Individual student follow up comments are due typically by 2 days after. Follow up posts are expected after the original due date and are not marked late. Discussions conclude 2 days following the due date. After this, any new post will be marked late and may not receive full credit.
PARTICIPATION: Students earn credit by participating with their group on projects during class and outside of class when necessary. This participation will be monitored by the professor. Failure to participate with your group may result with a 0 for the assignment and will result in a 0 for that week's participation grade. The lowest two participation grades will be dropped at the end of the semester. Participation grades cannot be made up. You can challenge them on the points themselves, but you cannot make up
MAJOR PROJECTS: Major projects build off of the knowledge gained from each section and the work done in the mini projects. They are intended to be completed as a group, although each also contains an individual reflection and potentially individual work, as well. There will be three major projects throughout the semester. These projects are more in depth and require more research and decision making on the part of the group. Submissions for each project are explained on that project's page. See each project for more information. Major projects may be submitted late. FINAL EXAM: The Developmental Mathematics department provides a final exam for all MAT1030/1035 students. All students in this course will take this exam

Homework	20%
Discussions/Mini Projects	20%
Participation	10%
Major Projects	15%
Practice Exams/Midterm Review	10%
Final Exam	25%

Required or Recommended Reading Assignments
All required readings use chapters from the course text that align with the lectures below.

General Description of the Subject Matter of Each Lecture or Discussion
Module 1: Course Orientation
- 1-1 Course Orientation (no textbook)
- 1-2 Working in Groups (custom textbook)

Module 2: Technology
- 2-1 Basic Excel (custom videos)
- 2-2 Advanced Excel (custom videos)
- 2-3 Technology (assignment)
- 2-4 Introduction to Lumen (assignment)

Module 3: Logical Fallacies and Collecting Data
- 3-R Real Numbers
- 3-1 Logical Fallacies
- 3-2 Statistics: Collecting Data

Module 4: Describing Data and Normal Distribution
- 4-R Introduction to Algebra
- 4-1 Statistics: Describing Data

4-2 Normal Distribution
Module 5: Probability and Expected Value
5-R Fractions
5-1 Probability
5-2 Applications of Probability & Expected Value
Module 6: Game Building
Game Building Major Project
Module 7: Measurement and Percents
7-R Decimals and Percents
7-1 Measurement and Unit Analysis
7-2 Proportions and Percents
Module 8: Problem Solving and Linear Growth
8-1R Exponents and Algebraic Expressions
8-1 Problem Solving
8-2R Linear Equations in One and Two Variables
8-2 Linear Growth
Module 9: Exponential and Logistic Growth
9-R Exponential Functions and the Definition of Logarithms
9-1 Exponential and Logistic Growth
9-2 Putting Modelling Together
Module 10: Modeling
Modeling Real Data Major Project
Module 11: Personal Finances
11-1 Voting Theory (Optional)
11-2 Apportionment (Optional)
11-3 Personal Finances
Module 12: Saving Money and Annuities
12-1 Simple and Compound Interest
12-2 Saving Money and Annuities
Module 13: Loans and Amortization
13-1 Loans and Amortizations
13-2 Putting Finances Together
Module 14: Finances
Financial Major Project

Required Course Syllabus Statements

Generative AI
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Using Remote Testing Software
☐ This course does not use remote testing software.

☒ This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may

require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities
Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU Accessibility Services at accessibilityservices@uvu.edu or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at DHHservices@uvu.edu

DHH is located on the Orem Campus in BA 112.

Academic Integrity
At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in UVU Policy 541: *Student Code of Conduct*.

Equity and Title IX
Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office

for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation

UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.

To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a specially dedicated space for meditation, prayer, reflection, or other forms of religious expression.