

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 #: 1035-007

Course Title: Quantitative Reasoning with
Integrated Algebra QL

Credits: 6

Course Description

Upon completion of this course, students should be able to communicate, interpret, and analyze quantitative information found in the media and in everyday life to make sound personal, professional, and civic decisions.

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: Dr. Benjamin Moulton

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):** Viewing Life Mathematically: A Pathway to Quantitative Reasoning; Denley and Hall **Microsoft Office Account (Required):** We will be making extensive use of the Microsoft Office suite, especially Excel, and Word. 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.](#))[Links to an external site.](#) to get your access. I also strongly encourage using the Desktop applications over the Online version as it has a better feature set. You will need this same account to use Microsoft Teams for any group meetings your group chooses to hold.

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 15 to 44 questions. The OHM system allows several late passes, which you can use on an assignment by assignment basis to remove late penalties if the assignment is finished after the due date. You can see the number of late passes available to you inside of the Lumen homework assignments. Homework will be 25% of this course.

Projects: Periodically throughout the term, you will be asked to work on projects that will help you work through several modules, making connections in the material you have been learning. Some of these projects will be done in groups and some will be done individually as outlined in the Course Schedule. When doing projects in groups, you are expected to meet with your group, either in class, at the same time in Teams meetings, or via appropriate communication channels, to accomplish these assignments. The projects are culminating assignments that tie several topics together. Each group project consists of a group portion, where your group will make decisions that will impact the course of your project. These projects include major freedom in what topics, designs, and research you perform, but provide structure to your work. Once the group portion is completed, all students are expected to reflect on what they have learned and will complete an individual assignment. Individual projects will have the reflection piece attached to it. The reflection pieces of the individual projects will not be considered a separate assignment. Projects will count as 35% of the overall course grade. A late penalty of 10% deduction per day late will be applied. **Midterm:** There will be a midterm exam midway through the semester that will be 20% of the course grade. Midterm exam format is yet to be determined. The midterm will take place in class.

Final Exam: The Mathematical and Quantitative Reasoning Department provides a final exam for all MAT1030 students. All students in this course will take this exam. The exam consists of questions that check both the skills and reasoning of students on the major topics listed below. • Logical Fallacies • Describing Data and Normal Distribution • Probability and Expected Value • Problem Solving • Unit Analysis • Financial Mathematics • Linear and Exponential Modeling • Statistics The final exam will be

the last graded assignment for the course and will focus on the latter half of the course material, although some material from the first half of the course will be on the final exam. The final will consist of four free response questions with multiple parts, followed by eleven multiple choice questions. The final will also be worth 20% of the course grade. The final exam will take place in class. Note: The final exam will be challenging, so it is recommended that students build up as high of a grade going into the final exam as possible (to build a cushion for their grade) with an understanding that their overall course grade may drop a bit following the final exam.

Extra Credit: I don't do extra credit. Just stay on top of your course work throughout the semester and do not procrastinate. Do that and you will do just fine.

Activity Percent

Homework	25%
Midterm	20%
Projects	35%
Final Exam	20%

Required or Recommended Reading Assignments

Click here to enter text.

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

AI programs are not a replacement for your human creativity, originality, and critical thinking. Writing, thinking, and researching are crafts that you must develop over time to develop your own individual voice. At the same time, you should learn how to use AI and in what instances AI can be helpful to you. The use of generative AI tools (e.g. ChatGPT, Google Bard, etc.) is permitted in this course for the following activities:

- Brainstorming and refining your ideas;
- Fine tuning your research questions;
- Finding information on your topic;
- Drafting an outline to organize your thoughts; and
- Checking grammar and style.

The use of generative AI tools is not permitted in this course for the following activities:

- Impersonating you in classroom contexts, such as by using the tool to compose discussion board prompts/responses assigned to you or content that you put into a Teams/Canvas chat.
- Completing group work that your group has assigned to you, unless it is mutually agreed upon that you may utilize the tool.
- Writing a draft of a writing assignment.
- Writing entire sentences, paragraphs or papers to complete class assignments.

You are responsible for the information you submit based on an AI query (for instance, that it does not violate intellectual property laws, or contain misinformation or unethical content). Your use of AI tools must be properly documented and cited in order to stay within university policies on academic honesty. Any student work submitted using AI tools should clearly indicate what work is the student's work and

what part is generated by the AI. In such cases, no more than 25% of the student work should be generated by AI. If any part of this is confusing or uncertain, please reach out to me for a conversation before submitting your work.

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.